PHOTO-ERA

The American Journal of Photography

Vol. XXX **APRIL, 1913** **No. 4**

PUBLISHED MONTHLY BY WILFRED A. FRENCH, 383 BOYLSTON STREET, BOSTON, U. S. A. Entered as Second-Class Matter, June 30, 1908, at the Post-Office, Boston, under the act of March 3, 1879.

YEARLY SUBSCRIPTION-RATES

United States and Mexico, $1.50. Canadian postage, 35 cents extra. Single copies, 15 cents each. | Foreign postage, 75 cents extra. Single copies, 20 cents each. *Always payable in advance.*

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OH, HOW SWEET!
HARRY D. WILLIAR

PHOTO-ERA

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Vol. XXX APRIL, 1913 No. 4

Systematic Photo-Finishing

K. R. BAMFORD

THE object of this article is to endeavor to point out the value of system, observation and foresight in commercial photography. Scientific management is a subject which is engrossing the minds of all keen business men to-day, and new methods and appliances for increased efficiency are daily being brought into operation.

Photographers in general have been very slow to adopt new methods and apparatus, probably due to the prejudice evidenced by a large number of "old-timers." With the average studio-photographer to-day, his system ends when he numbers his negative and puts the customer's name and address on the envelope. However, it is not my intention to discuss system for portrait-studio operation in this article.

The most important adjunct, to-day, in any business is system, and particularly so in commercial photography, not necessarily as a time-saving scheme, but as a means of keeping accurate track of all the varied kinds of work found in this branch. System not only in one branch, but a complete, perfect system all the way through — from the time an order is received to the time it is finished and delivered. Such a system for handling work in an accurate and rapid manner and, at the same time, enabling one to locate an order almost instantaneously, can be operated as follows:

First of all, get a large book ruled as follows:

Number of Order	Name	Address	Amount and Kind of Work	Price	Date Received	Date Promised	Date Delivered

Next have a set of seven upright shelves, starting at the top with the first marked "Rush," for rush-work.

Second shelf — Monday; third shelf — Tuesday, and so on downward for the remaining week-days.

The object of the shelves is to keep the work in rotation. For instance, orders received on Monday would be promised for Wednesday; orders received on Tuesday would be promised on Thursday and so on; the work, of course, going on the shelf corresponding to the day promised, which would keep each day's work separate and distinct and prevent confusion.

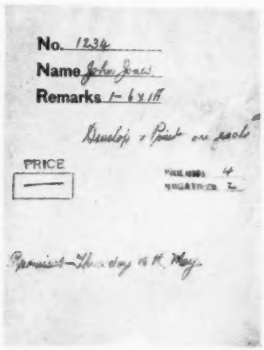
When an order is received, it is promptly entered in the book; if developing, it goes to the darkroom; if printing, it goes to the printing-room; if enlarging, to the enlarging-room, and so on. If each department handles a large amount of work, then each must have a separate set of shelves. The value of the shelves is shown by the ease and speed in which any order can be located; all there is to do is to look up the record and note the kind of work ordered and day promised for, and it will be found on the shelf corresponding to the date.

There are many labor-saving and time-saving devices used in numbering films; but the simplest and most effective — in regard to the saving of both labor and time — I have found, consisted of a box 8¾ x 6 x 5½ inches, such as a five-pound alum box, lined with asbestos, with an electric bulb inside, and light-tight. Note the accompanying illustration carefully.

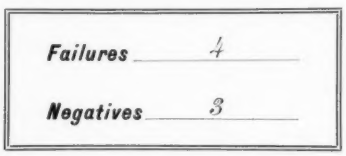
The lid has a small oblong hole cut in it just the size of the number on the envelope. Over this hole a small piece of glass is fitted, so as to be flush with the lid. When the envelope is placed on the lid, the number comes directly over the hole previously cut in the box, the end of the film is placed on the number and the light switched on and off to make the exposure. The time varies, of course, according to the thickness of the envelope. For the average envelope of double thickness an exposure of one second will be found sufficient. Both ends of the film should be numbered in this manner. The numbers will then develop with the pictures, only, of course, reversed. An objection, how-

ever, can be raised to this method of numbering films, by some, who will ask, "How about the numbers when the film is fogged?" to which I reply that, "In all my experience, I have never had a mix-up from this cause." With regard to numbering plates, the old method of marking with a pencil is as effective as any. The most effective method to keep film-packs separate, I have found, is to clip just enough off the corners to be noticeable, viz.: one set, one corner; another set, two corners; but when there are more than four sets of the same size, it is a good plan to clip opposite corners. There is still another method to separate film-packs, and this is to punch; but this practice should be discouraged, as careless workers are apt to punch too far in on the film and thus spoil the picture.

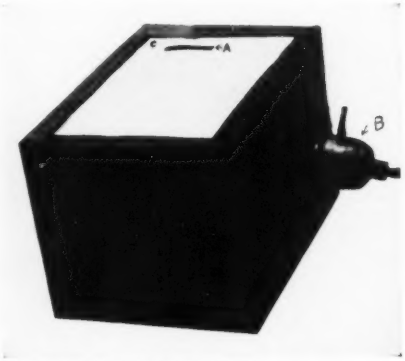
On the numbering-box the electric bulb enters at B. The envelope with the number is pushed into the corner C for numbering the film laid on top of it. Light passes up through the slit A, through the numbered part of the envelope, and onto a sensitive end of the film.



For use with orders for developing and printing, it is advisable to have a rubber-stamp marked in the following manner:



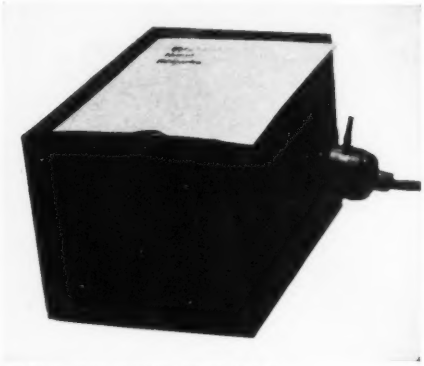
and such orders should be stamped with this mark. When the films are dry, all the printing and developing envelopes should be laid out in rotation. It is then an easy matter to clip each film to its envelope, when they can be cut up for printing. When cutting the films, all the failures should be put in tissue envelopes in order to avoid confusion in the printing-room and to keep them separate from the negatives; have the amount of each marked opposite the rubber-stamp mark. The same method applies to plates and film-packs.



NUMBERING-BOX FOR FILMS

When printing, first of all sort the sizes, and keep them together as much as possible to avoid changing masks; observe the illustration of the printing-frame with the adjustable mask, which will handle any film from 5 x 7 size down.

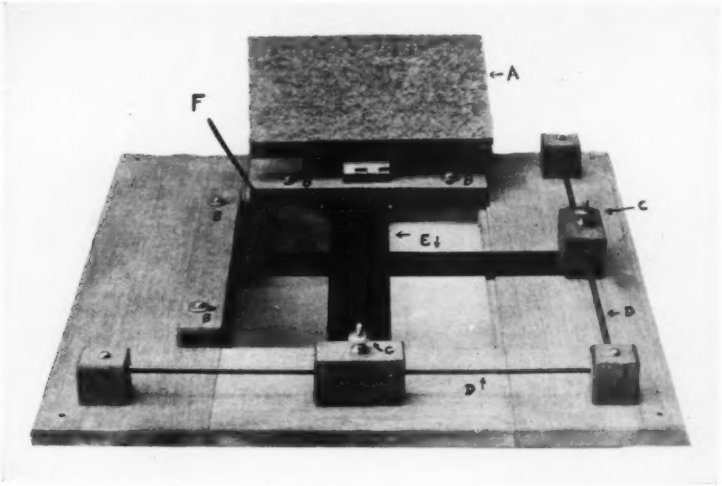
The screws B are loosened to permit a broader or narrower border on the print. The celluloid mask-strips E are on the runners D, to which they can be locked, when many of the same size prints are to be made, by the locking-screws C. The film is placed at F, the gaslight



READY FOR NUMBERING FILM

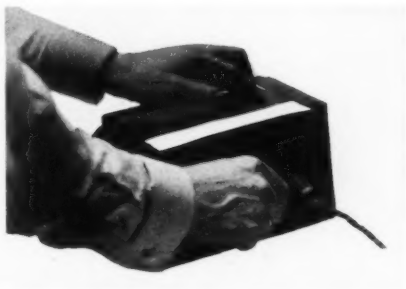
paper put on top and the back A is lowered to hold all in place during the exposure.

When numbering prints, a stamp should be used, because it gives a neat number and at the



ADJUSTABLE PRINTING-FRAME

same time it is speedy. The cost of such a stamp is soon repaid by the time saved. Of course, it is not a good policy to run the stamp up into more than three figures, because this will hinder the sorting to a certain extent, and in the rush-season every minute counts. There are many ways to sort prints; but the fastest method I have found, is to sort them in hundreds first, next in tens, and, finally, in units. The advantage is that each batch is complete in itself, and can then be immediately finished up.



NUMBERING FILM

Sorting prints in this way is also a great space-saver, which is another important consideration in cramped quarters during the busy season. There are many instances which occur where two men can do certain work in one-fourth of the time that it would take one man; and the alert foreman will note these instances and take full advantage of them; it is astonishing how much time can be saved with a little foresight.

One of the most important things is to have all the employees work in harmony, if possible; that is, work into each other's hands in helping the work along, and it is also a good thing to have them interested in inventing new ideas or improving present methods of working. It isn't likely an employee will offer suggestions, unless he thinks the proprietor will appreciate them; so it is well to try to stimulate this kind of interest, and the results will be gratifying.

Never publicly rebuke a man for an unintentional error, just give a gentle hint, "to be more careful in the future," and he will appreciate your consideration and you won't lose by it.

The elimination of waste is another point worthy to be considered. Of course, nearly every photographer knows the value of old discarded hypo-bath; but for the benefit of those who do not, I would say get in touch with the nearest metal refiner who will take all the precipitated silver available and thereby add to your yearly profits.

When there is a lot of printing and enlarging done, as a general rule there is considerable waste, which is unnecessary. Of course, in photographic work there will always be waste; but minimize it by employing skilful assistants and educate them to the right idea that the less waste, the more money and time saved; therefore their services are valuable in a corresponding degree and should be recognized. In these circumstances, you will get the best quality of work, with the least amount of labor and in the shortest possible time.

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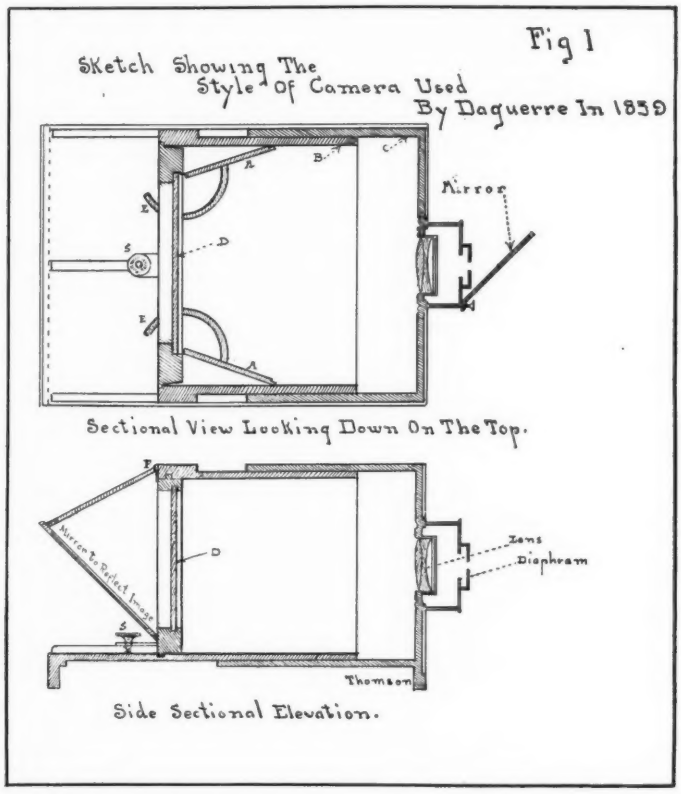
Daguerre and His Invention

JAMES THOMSON

TO the present generation, it is a far cry to the daguerreotype. There are those who have never seen one, nor know that it is a photograph. Others, again, are familiar with the embrotype and mistakenly imagine it to be a daguerreotype.

It is now some seventy years and over since the world was astonished as well as delighted with its first photographs, and, though we have seemingly since then gone far, in artistic quality and delicacy they have never been excelled. These fine old pictures are now scarce enough to confer distinction on families that possess them. If among your family pictures are a few daguerreotypes, prize them as if they were Copley's or Stuart's. The years will but enhance their value.

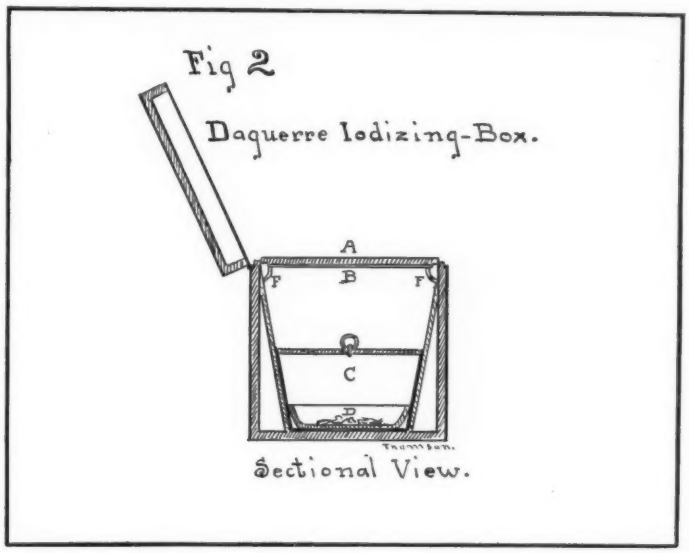
Photography was given to the world in 1839. To Louis Jacques Mandé Daguerre must be accorded the honor of its invention. He was a painter of dioramas of more than common capacity, and was known as such in England as well as in his native France. Like many another artist of the period, he had been accustomed to employ the *camera obscura* in sketching natural objects. Struck with the beauty of the images thus thrown upon the ground-glass screen of the camera, he, in the year 1824, harbored the idea of in some manner fixing such fugitive counterfeit presentments of the very beautiful landscape views around Paris. From this time on until the fruition of his hopes, his effort was devoted unremittingly to this object.



About the same time, another Frenchman was at work along the same lines. While Joseph Nicéphore Niepce had not succeeded in getting "sun-pictures" by exposure in the *camera obscura*, he had certainly been able to

obtain an etched copper-plate by exposing it to the sun under a drawing that had been made translucent. He and Daguerre were brought together by a mutual friend, and after comparing notes agreed to work for a common end, *i.e.*, the production of sun-prints through the mediumship of the *camera obscura*.

Before there were any tangible results, however, Niepce died. Daguerre then continued



experiments; but evidently along original lines, separating himself entirely from the ideas suggested to him by the discoveries of his partner. By the end of 1838 Daguerre had perfected his invention and attempted unsuccessfully to float a company to buy him out. Balked in this endeavor, he appealed to the government, and was so fortunate as to enlist the kindly offices of the noted astronomer and scientist, M. Arago, who was able to get for him a life pension of six thousand francs, and for Isodore Niepce, the son of his dead partner, four thousand francs. In return for this, the process was to be explained so that all who cared to use it could do so.

The daguerrean process, as originally worked by the inventer, was unsuited to aught but landscape transcribing, being too slow for portraiture. Even in outdoor-work it was very slow; sometimes in the latitude of Paris it required an exposure of half an hour. The daguerreotype — for such it had been agreed it should be called — was made on a silver plate. A sheet of copper, card thickness, was silver-plated on one side, and that silvered surface polished to the highest possible degree of brilliancy, after which it was made sensitive to light by exposure to the fumes of iodine.

In 1840 came an immense increase in sensitiveness when Goddard suggested that bromine be added to the sensitizer. This made portraiture possible, and from that time on the daguerreotype was, from the commercial point of view, a success. In all the large cities of the country the daguerreotypist was to be found, where for from three to five dollars an excellent likeness could be had. Between the years 1840 and 1850 a great many daguerreotypes were made, and it is averred that at one time there were as many as ten thousand practising daguerreans abroad in the land.

In 1841 came the Talbot gallo-nitrate negative process, which, conjoined with the Archer collodion wet-plate process that came along some nine years after, was sufficient to give the Daguerre process its quietus. After 1850 the practice of daguerreotypy decreased until constantly improving methods finally compelled its abandonment. Thus in about ten years after the giving to the world of the Daguerre process, it was to all intents and purposes obsolete.

This abandonment can be readily understood if one will but reflect on the fact that by the daguerrean process but a single picture was possible at a sitting, and that a long one, while by up-to-date methods, any number of positives was

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obtainable once the negative had been made, and the making of the negative was each day becoming a matter of less difficulty.

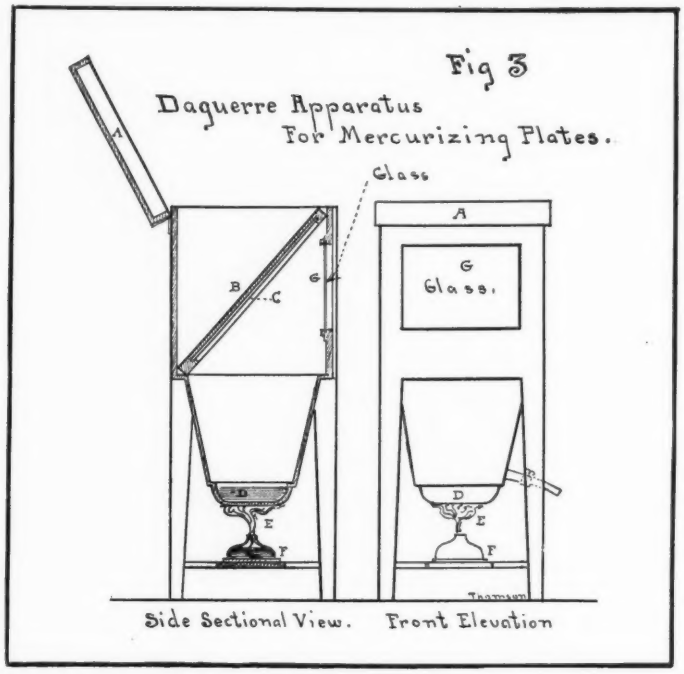
As a photographic means of expression, however, the daguerreotype has never been excelled or even equaled. The necessarily long exposure produced a likeness which we look for in vain where present-day portraiture is involved. Present-day sitters are self-conscious, and look it.

Readers may be sufficiently interested to have explained to them the manner in which the pioneer photographs were made. I have sketched the camera as used by Daguerre and also the apparatus for fuming and mercurizing, as recommended by him in his announcement of 1839.

In Fig. 1 is shown the *camera obscura* as used for photographing in 1839. AA are folding-doors which are operated by movement of the semi-circular brasses EE. When focusing has been effected, the ground-glass is withdrawn and the sensitive plate substituted. The mirror at the back reflects the image when it is thrown upon the ground-glass. As the image is reversed, as regards right and left, the small mirror in front of the lens is employed to correct the inaccuracy.

Fig. 2 shows the iodizing-apparatus. The pot C is of iron and in the pan D are the pieces of iodine. When the plate is in place, the cover is lowered; and once the silver has assumed a golden yellow hue, the operator may rest assured that action has been carried sufficiently far.

In Fig. 3 is shown the developing-apparatus. AA is the cover, B the board and C the plate. D is the cup filled with mercury, which latter is heated to a temperature of 140° Fahrenheit by the flame E issuing from the lamp F. At G is a glass through which the progress of development may be observed. When development is seen to have gone far enough, the light is removed, and the temperature permitted to fall to 113° Fahrenheit, when the plate maybe removed and fixed in common salt (1 to 4) or what is still better hyposulphite of soda. Fixation is complete when all yellowness due to the presence of iodine of silver has departed. The plate must be handled with pincers, and on no account must the fingers touch the image.



The Daguerre plate was doubtless no more sensitive than present-day gaslight paper, if we consider that both can be safely handled in subdued daylight. Daguerre in his first instructions has this to say regarding delayed fixing, "The plate need not be fixed for months, provided it be not too frequently inspected by full daylight."

The Comparison of Plaster-Casts

W. W. KLENKE

CURIOSITY with its attendant desire to know and to get at the bottom of things, that we may differentiate between the good and the bad, is not confined to any one people or any one thing, but is a world-wide characteristic. It embraces all things, although our degree of knowledge differs as to the making of certain articles and their respective merits.

Many of us have an opportunity to become acquainted with the manufacture of different objects by visiting factories; but few of us ever have such an opportunity in connection with the making of plaster-casts of statuary. Many of us have gained a knowledge of the process of making rugs, which has helped us in our selection of them. Perhaps some of us have even been taught various crafts in schools for weaving, pottery, jewelry and many other useful pursuits, but how few have given the making of plaster-casts a place. In this respect we are more like the average person, who goes to an art exhibition to delight in paintings he believes he *ought* to like. Too often we are afraid to express our own ideas on the subject.

When you purchase some reproduction of a well-known painting, you probably wonder why it costs so much, and what there is good about it. You think you ought to like it, because it is copied by a skilled artist and, therefore, it must be good. So it is with statuary. Because a piece of sculpture has been executed by a famous man, it does not necessarily follow that the reproduction is as good as the original. A copy, by an incompetent artist, of a famous painting, like the "Horse-Fair," or of so well-known a piece of statuary as "Venus de Milo," loses its value if it differs from the original in technical accuracy.

All copies of such statues as "David," "The Slave," or any other one could mention, are not alike unless produced from the same mould

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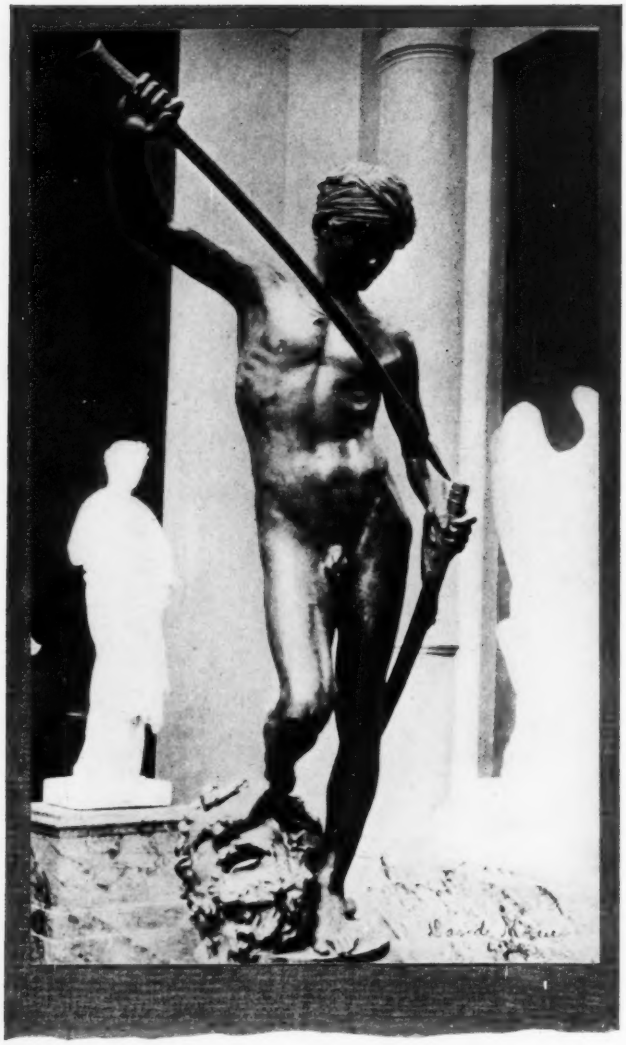

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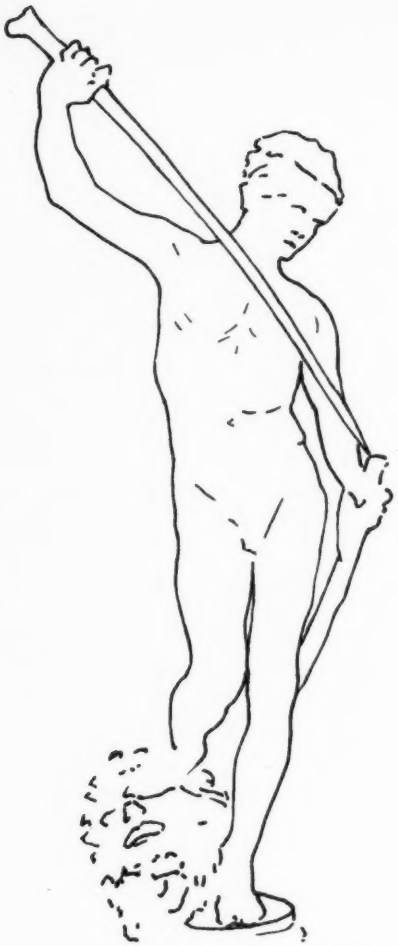
and by one and the same firm. To be sure, they all resemble one another in a general way so that we cannot mistake them; but it is my intention to go a step further in this article and explain, by comparing photographs, why and how plaster-casts do differ so much, and to put you on your guard when purchasing casts of well-known works of art.

In a brief way, let me give some idea how the cast has been made. Let me state right here, that there is only one original. You have often been told by the museum attendant, that such and such a statue is an original. Maybe it is: but the chances are that it is a copy. This copy is made in one of the following ways. The first step is to make a mould (a negative) directly from the original statue. The number of parts in which this mould has to be made, is governed by the complexity of the original. Should the statue be more or less of

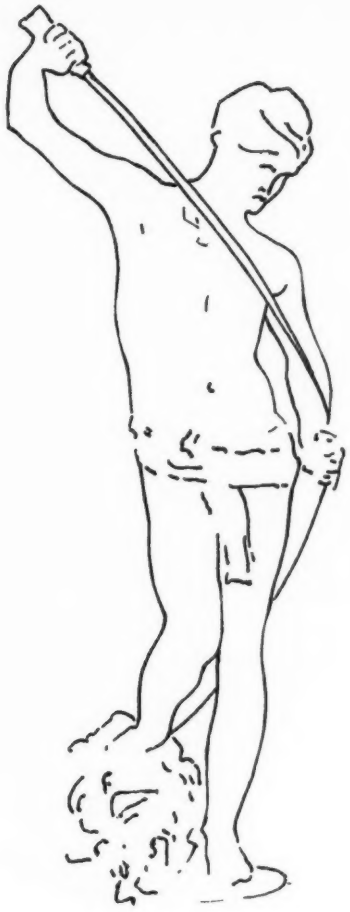
NO. 2

one solid mass, the casting is done easily; but where there is an outstretched arm or leg, the casting becomes more complicated.

Often it is not possible to copy directly from the original, and in such a case, the cast-maker must make a statue as near to the original as possible, in either clay or wax, according to the size. He can make it any size he wishes, the simplest, of course, being the original size; for then he can take his measurements directly from the statue, just as the stone-cutter or wood-carver would do. He draws in clay, as it were, the profile in all possible positions. From the right, the left, the top and the bottom, because he has the third dimension to deal with. After his clay or wax figure is complete, the mould is



NO. 3 TRACED FROM NO. 1



NO. 4 TRACED FROM NO. 2

made. The mould having set, the parts separated, and the clay or wax dug out, the form is no longer of any use. When the mould has been thoroughly cleaned, the cast is made by filling the negative with plaster of Paris, in which manner the positive is obtained. Of course this description is very brief, as it would take too much time and space to go into details. The layman can understand at once, that there is a great chance to err in all the various stages towards completion.

Should the cast-maker wish to make the cast a size other than the one he has before him, he does this with an instrument made for this purpose, but too lengthy a process to describe here. This method also leaves room for mistakes, as does the first one, as will be seen further on.

Let us for a moment come back to our first process, the mould taken from the original. The first few reproductions made from these moulds are always the best. The oftener a mould is used, the more wear it shows, the delicate modulations are no longer apparent, parts break off, things are rounded that were sharp, the expression is lost — the very soul, as it were, has been taken away. That's why one hears a man boast of the first or second reproduction of a certain statue. Paint or whitewash an old,

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soiled cast, and you will readily see how much of the original value it has lost.

It was the sculptor's aim — and it should be with all of us in making works of art — not merely to copy or imitate, but to create, to put his soul into his works, to feel the expression, to imagine the pain, to be led mostly by his emotions; and this cannot be done in the same way by other persons. You and I have different ways to express an emotion; why is this not also true of the sculptor and the copyist? With the copyist the entire process of making the statue must be a mechanical one, that is to say, he cannot allow himself to be lost by his emotions, otherwise his copy will be untrue. The copyist usually makes doll-like faces, bodies without blood, arms and legs that look as if they were turned on a lathe.

There still remains a last way to bring casts of well-known statues before the public, and an unworthy one, to be sure. This is done by the "Itinerant Vender." From what I was able to gather from one of them, I learned that they made their own originals and casts. These men are largely without art-training, and, in this respect, their productions talk for themselves. Had I been disposed to photograph some of their statues, I could easily point out their great defects.

While halftone reproductions of paintings in books of art are usually very satisfactory, those of statuary are less so, for the reason that statues are generally less accessible to the camera than paintings, and cannot be as easily moved. Also, the lighting of statuary is not often very favorable; but the conscientious photographer can always obtain permission to modify the light and, by the use of reflecting screens, is able to obtain quite satisfactory results. Of course, when the camera is placed,

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as it usually is, no higher than on a line with the top of the pedestal, the resulting picture shows the statue as seriously foreshortened. Sometimes the head of a standing figure will appear altogether too small in proportion to the lower limbs and, when a short-focus lens is used — on account of cramped quarters of the art-gallery — the distortion is even more marked. Unless the photographer can arrange to have the camera raised to a proper level, he is severely handicapped, and unable to obtain a satisfactory picture. The photograph of the cast by Caproni is particularly successful because it was made under highly favorable conditions.

Let me direct your attention now to the two pictures of "David." The original is by Mercié, and stands in the Luxembourg Gallery; Illustration No. 1 is a copy of a faded photograph of the original statue. Picture No. 2 is of a cast that is considered a good copy, so far as copies go; but even here I want to point out some defects.

On account of circumstances, it was impossible for me to obtain exactly the same view in picture No. 2 as in No. 1; therefore we must make allowances. My attention was first drawn to the general swing of the body, and this can best be seen by the line-drawings No. 3 and No. 4. With No. 3 I feel that there really is a bony structure inside the flesh-like body. The general form of the ribs is expressed, showing more prominently on the side with the arm uplifted. The figure carries the weight of the body on its left leg, which is shown better in No. 3 than in No. 4. See how long the neck and head in No. 4 are, which is even better shown in No. 2. Note the strength of the legs on No. 1, with slender but well-built ankles, and the wooden, turned legs with swollen ankles on No. 2; hands with no flexibility — mere blocks. There is a certain freedom of grasp in the hands of No. 1, but none in No. 2. In this copy the anatomical structure of the neck, as seen in the original, is wholly lost; also the position of the left elbow is wrong, being extended too far from the body. The sheathing of the sword is the most important thing of the statue; and yet, see the position of the sheath in No. 2 and No. 1, and then, too, are we to be satisfied with a mere block of wood to stand for the beautifully shaped handle in No. 1? I hesitate to make the following statement, lest I be misunderstood; but as a student and lover of art I cannot but feel that the step of modesty in No. 2, so overworked with many so-called modest people, has added nothing to the vigor and grace of copy. To the contrary, it has broken our feeling of the pose, not only by the lines of opposition, but by the entire loss of the bony and muscular structure beneath. We can, without much imagination, feel a living model in No. 1, with bones, muscles and blood; but No. 2 to me will always remain a mere cast — smooth, insipid, without character. What a difference in No. 5! This cast, made from a mould produced with the approval of the French government, is virtually as good as the original statue, in the Luxembourg museum. This particular view is in every way superior to No. 1. The poise of the figure, the grace, the solidity of the composition, the lighting and the proportions — all are pleasingly brought out. True, one may say that the abovementioned differences are not great; but is it not the small things, after all, that go to make the harmonious whole? Are we to be satisfied with what we are obliged to accept; or shall we, by intelligent selection, and by a knowledge of the good and the bad, raise the standard of excellence to that point where the cast-maker as well as any other purveyor of works of art shall have to give us as good as our high standard demands? Let the public insist on better copies of works of art, and the dealer will have to cater to these demands.

As a closing word let me add, that I only take the standpoint of a student and lover of art, not with the idea of offending any one in particular, but with the hope that I may stir in you a desire to think, and to look at the bottom of things. Remember that we see what we are looking for. The faults are there, and we can pick them out when our eyes are better trained.

[Antonin Mercié, the author of the statue showing David sheathing his sword, the subject of Mr. Klenke's article, is one of the foremost of living French sculptors. He is a pupil of Jouffroy and Falguière, and at present president of the Society of French Artists. At the age of twenty-three Antonin Mercié won the Grand Prize of Rome. On his return from Italy, he obtained at the Salon of 1872 a first-class medal and the cross of the Legion of Honor for his statue of David. Two years later he received the medal of honor of the Salon for his Gloria Victis, a superb bronze group which decorates one of the courts of the Hotel de Ville, and, in 1878, at the Universal Exposition, he received another medal of honor. In 1889 he won the *grand prix* and was successively promoted as Officer, Commander and Grand Officer of the Legion of Honor. The Academy of Fine Arts, in 1891, elected him to succeed to the chair of Chapu when he was only forty-six years of age. His colleagues have recently given him the supreme distinction of placing him at the head of the Old Salon, the first time that this honor has been conferred upon a sculptor. — Editor.]

THE SONG OF THE BIRDS LONDON SALON, 1912 DWIGHT A. DAVIS

Selecting a Second-Hand Camera

VIRGINIA F. CLUTTON

NOW that spring is in the air, many an amateur is gradually rousing himself from his long winter hibernation (photographically speaking) and beginning to look over his photographic equipment. He may, perhaps, decide to increase its efficiency through the purchase of an additional camera or lens, and it is quite likely that one or more of the advantages of buying a used instrument may incline him favorably toward such a purchase. Or he, who has never been the proud possessor of a camera, may desire to use a second-hand machine in traveling the first few steps, at least, of his photographic career. A decided financial advantage is likely to result from such a move if the camera be carefully selected; but all too often the inexperienced amateur buys an instrument without first subjecting it to a thorough examination — frequently with the result that, after a few trials of his late acquisition, he finds himself considerably out of pocket, and even more out of patience.

At this point the writer fancies the voices of many tyros rise in great acclaim, crying: "But I *did* examine the camera before I bought it, and it looked all right! — how was *I* to know it was practically worthless?" — yes, truly, how *are* we to know that the second-hand instrument we select is all that it seems to be, and that the owner says it is? The inexperienced prospective purchaser is more or less at the mercy of the camera-owner, and the degree to which he may be "stung" usually depends only upon the quality of the latter's conscience.

The veriest tyro, however, who will put himself to some slight trouble, may place himself in such a position that an intelligent selection among the available cameras is quite possible, and at the same time learn much that will ever be of value to him.

Of course, the first step is to decide for what class of work the camera is to be principally used, and what type of camera, as well as size of plate or film, seems most desirable. These are points which must be considered and determined by the purchaser himself, but it may not be out of place to suggest in passing that, while a very large camera has certain advantages over the tiny or medium-sized models, it has also many disadvantages: it is bulky and seems wofully heavy if carried upon an expedition of even moderate length, besides being less easily manipulated. This latter feature makes work under unfavorable conditions of weather, position, and the like, quite difficult, and speed-work, street-scenes, and similar subjects well-nigh impossible to obtain. The initial cost is great, and the continual drain upon the purse for supplies is correspondingly heavy.

The next point to consider is whether plates or films shall be used; and in this connection one must again bear in mind the chief use to which the camera is to be put. If it is to be a traveling-companion, one will probably choose one of the film cameras because of its greater portability; and if roll film is used, every operation may be carried on in daytime, which is a great advantage when one desires to load his camera several times during the day, or to develop at least a few films before returning home from an extended journey. On the other hand, if one uses his camera within a short distance of home, portability is not such a marked advantage, and one may prefer plates because of their far greater range of speeds and color-sensitiveness, or their comparative cheapness. The pictorial worker nearly always uses plates because they permit him to focus accurately and to compose his picture to his satisfaction on the ground-glass, while — should he later desire to work up the negative — this may be more readily accomplished when the supporting substance is glass, rather than celluloid. Other points might be mentioned in favor of either films or plates, but the foregoing are perhaps the most important.

Having made a decision as to these various points, you should not purchase an instrument which does not fulfil your requirements, simply because the salesman has a glib tongue, or the price seems low.

Never, under any circumstances, buy a used instrument about which you know nothing: get permission to try the camera for a stated period — say ten days or two weeks — and by all means make good use of this time.

Having the camera in your own possession, you should first consider its make. If this is standard and the instrument is not too old, and does not appear to have had excessively hard usage, your confidence therein will rise accordingly; but do not be persuaded to allow this cursory inspection to satisfy you. Thoroughly examine the lens and working parts of the instrument, and assure yourself that all is right before making the purchase.

After a hasty scrutiny of the camera as a whole, one may profitably turn his attention to

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A SPRING-SONG ANONYMOUS

a more careful examination of the lens in relation to the box. Assure yourself, first of all, that it is held firmly in place, so that no vibration is possible during an exposure; that no screws are missing; and that it is properly centered. Remove the cells and make certain that the inner surfaces of the tube, and of the camera-box, cannot ruin any plates through light-reflection. They should be painted a dull black.

Before replacing the lens, lay it upon a sheet of perfectly white paper in a good light, and observe whether the glass is clear and white, or has a yellow tinge. In the latter case the lens is not likely to work at the speed at which it is listed, and the photographer who desires to do rapid work — and who does not, at least at times? — will do well to look farther before purchasing.

At this time, also, note whether the lens is perceptibly flawed in any way — or scratched. If an anastigmat is being considered, the observer must not be alarmed at the presence of bubbles in the glass, for it is next to impossible to prevent the formation of these in Jena glass, and their presence in no way injures the speed or definition of the lens. Other flaws are usually more serious in their nature, and their presence should deter any amateur not thoroughly acquainted with the extent of the injury to the lens in question, from buying it.

The lens should be highly polished. If its surface has become dulled or scratched, one may be sure that both speed and definition have been impaired, and a lens thus marred is never a safe investment for an inexperienced buyer.

Replacing the lens once more in the camera, be sure that it screws firmly home, for if it does not do so, its power of definition will be greatly decreased and a more or less blurred image will result.

In order that the definition may be clear and sharp all over the plate, this latter must be perfectly parallel with the lens. Perhaps the easiest way to ascertain whether or not this is the case, is by means of the plumb-line, dropping it first from the front, and then from the back of the camera while this latter is placed in a perfectly horizontal position on some stable foundation.

So much for the observation of the external characteristics of the lens. Let us now make careful investigation of its actual capabilities. The average amateur has not the requisite apparatus to make elaborate tests such as those to which the lens is subjected before it leaves the factory; but there are simpler experiments which any amateur can perform, and upon the results of which he may rely, except in those rare cases where the lens is to be used for very special and particular work. It may be assumed that the photographer who needs such a lens

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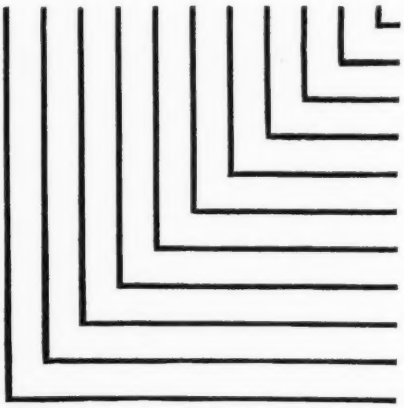
will know how to have it tested. For all ordinary work, however, such a test as the one hereinafter described will give the amateur a very excellent idea of the powers of his lens.

Fasten to a well-lighted wall, in a perfectly smooth and perpendicular manner, an optician's test-chart, or any convenient hand-bill or poster bearing reading-matter only, and preferably set with type of various sizes. If it is an anastigmat that is being tested, it will be well to paste in each of two corners (one upper and one lower) a square made of two triangles of heavily-ruled paper, of such size and shape as to fit together as shown in the accompanying diagram. The sheet of ruled lines which so often accompanies a tablet of thin plain writing-paper is admirable for this purpose. It should, of course, be printed in black ink rather than blue.



Place the camera directly opposite the center of the placard in such a position that the image will fill the plate, so that one can observe the quality of the definition at the margins of the plate, as well as in the center. Make certain that the camera is quite level in order that the planes of the ground-glass (or plate), the lens and the poster will be perfectly parallel with one another. Focus sharply on the center of the printed matter, and make the exposure with the lens *wide open*. In all such tests the exposure should be gauged most carefully, for much of the value of the experiment depends upon correct exposure and development.

An examination of a print from this negative will reveal several points to the observant eye. The degree of sharpness of the image will naturally be the first claimant to one's attention. If this is not satisfactory, and there has been no false step in any of the preceding operations, the lens should be rejected. A second trial, however, may prove the lack of definition to have been the result of an error in focusing, or in some other particular, rather than to any fault of the lens. Spherical or zonal aberration, or coma, may cause such a condition, however, and these defects may be found in anastigmats as well as R. R. lenses. They manifest themselves in a general indistinctness of the image, or in an apparent fog or veil over the whole field. The term "coma" refers to that form of spherical aberration which, affecting the oblique light rays, causes an indistinctness at the margin of the plate although the center may be sharp, while zonal aberration causes a blurring of the region between the margins and the center of the plate. In the best lenses these defects are fully corrected.

Chromatic aberration, when present, causes an indistinctness of the image because the chemical or actinic rays, which act upon the plate or film and "take" the picture, do not form their image at the same distance from the lens as do the visual rays (those we see and use in focusing). Otherwise stated, the lens so affected forms two images to one of which the eye is sensitive, while to the other the plate is sensitive. These images do not lie in the same plane, so that if the one which appears to the eye is in focus on the ground-glass, the other or chemical image is in focus elsewhere, and must be blurred in the plane of the ground-glass, so that, if an exposure is made, the resulting picture will also be blurred. Virtually all modern lenses are well corrected for this defect, however, so that the amateur need have but little uneasiness in this regard.

Next, notice the lines of printed matter as reproduced in the print: are these lines absolutely straight? If so, the lens is rectilinear. If, however, distortion be present, the lines will swell outward (barrel-shaped) or curve inward (cushion-shaped) in greater or less degree, yet in landscape work and subjects of a similar character, this distortion is not usually objectionable, nor indeed noticeable. Using a smaller aperture does not improve this condition as it does in the various aberrations previously considered.

Observing now the images of the bits of paper that were fastened to the corners of the poster: are both the vertical and the horizontal lines clearly and distinctly imaged? They must be so if the lens is an anastigmat, and cannot be so if it is not. The defect is called astigmatism, and when present only one set of lines at a time can be clearly shown, no matter how carefully the focusing may be done.

(*Concluded in May issue.*)

Enlarged Negatives and Control in Printing

A DISCUSSION at a recent exhibition arose as to which was the better: the direct enlargement, with its final control of values, in the print, or the enlarged negative, with all alterations, made on the plate, so that the final result was in the nature of a "straight" print. The point is an interesting one, inasmuch as both sides of the question have undoubted advantages, and the real test of the matter is whether one or many prints of a given subject are required.

In the first case the enlarged "controlled" print is probably the easier method; but if the amount of control has been considerable, and several identical prints are required, it is far better to make an enlarged negative and put all the work into that. This plan, if necessary, still leaves a margin for further control when making the print.

It is a difficult matter to define just what is meant by control. Suppose, for instance, a negative which, when printed in carbon, gives a flat and muddy print. It is intensified, and then gives a satisfactory print. This alteration, or correction, cannot be called control. It is simply correcting a mistake which has arisen through a previous error of judgment. It does what would probably have been done by prolonging the development.

Again, assume that a landscape negative has been over-developed, the highlights have become so dense that the cloud-forms are lost, and the sky prints quite white. The application of a suitable reducer will bring down this over-density and the clouds will then be printable; or the landscape portion may be shaded so that the sky prints out at its true value. This method is generally conceded by the purists to be perfectly legitimate. In other words, intensification and reduction are methods of remedying the shortcomings of the process rather than of the worker.

The dividing line is, however, extremely slight. Assuming the sky in the negative is blank, the exact differences that may be argued to exist between reduction, shading the negative to force the printing of a certain portion, printing in a sky from another negative, or working in an entirely new sky in a bromoil print, are not entirely clear.

To carry the matter a step further, local intensification and reduction on the negative to reduce halation or strengthen shadow-detail are generally acknowledged to be perfectly "straight" methods, yet to announce that exactly the same result has been achieved by skilful brush-treatment in a bromoil print, is to court condemnation as a "faker."

To apply once more the well-worn phrase, "*Ars est celare artem*," the legitimacy or otherwise of any method of control which may be employed in the production of a photographic picture is in exact ratio to the extent to which it is detected by the observer.

Some Practical Considerations

The production of enlarged negatives is a fascinating phase of work for the amateur — particularly if he succeeds. For the worker who fails to obtain satisfactory results, direct enlargements on paper and subsequent working on the prints is an easy way out of the difficulty.

The big negative, however — say, up to 15 by 12 — whether on glass or paper, offers such scope for the exercise of individual treatment (coupled with the fact that the final result will be acclaimed a straight print by the purists), that every worker is advised to make the experiment, if he has not already done so.

An additional attraction in favor of the process is that when a really valuable or important negative is being enlarged, there is a transparency in existence from which another negative may be reproduced in case of breakage.

There are two methods in vogue for the production of enlarged negatives. The first and probably more generally adopted plan is to make a small transparency by contact from the original negative, and make the enlarged negative from that, bearing in mind to keep the transparency very soft and delicate so far as gradation and tones are concerned. Or make the transparency by enlargement and the final negative by contact.

Each method has its advocates, and while it is granted that the big transparency-method is more expensive, it is undoubtedly the most satisfactory of all. It permits three distinct phases of correction — first, in the original negative a certain amount of corrective treatment may be applied; secondly, the enlarged transparency allows far more scope to retouch than a small contact positive; and lastly, the enlarged contact negative affords an opportunity for final control not possible in the transparency. In fact, by this method it is possible to so improve the tones and values of a faulty picture, that final straight prints in platinum or carbon may be obtained in a manner to

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DR. JAGADIS CHUNDER BOSE
J. G. THORP

satisfy the most exacting. In fact, it is not too much to say that many prints acclaimed at exhibitions as examples of straight photography have been made in this manner.

In all cases, however, whether the method of control employed is in the negative or the print, the best advice that can be given is, "Always make a pilot print." The amount of trouble that can be saved by this simple expedient is enormous. Not only does the preparation of a rough preliminary print, with the accents of light and shadow clearly marked, give a better idea of the final result required, but by thus clearly defining the final result, the worker can attack the subject with a surer hand. It is in its uncertainty that the average "controlled" print usually betrays itself.

The Amateur Photographer.

Principles of Composition

Ways of Creating Harmony

ARTHUR W. DOW

FINE art, by its very name, implies fine relations. Art-study is the attempt to perceive and to create fine relations of line, mass and color. This is done by original effort stimulated by the influence of good examples.

As fine relations (that is, harmony and beauty) can be understood only through the appreciations, the whole fabric of art-education should be based upon a training in appreciation. This power cannot be imparted like information. Artistic skill cannot be given by dictation or acquired by reading. It does not come by merely learning to draw, by imitating nature, or by any process of storing the mind with facts.

The power is within — the question is how to reach it and use it. Increase of power always comes with exercise. If one uses a little of his appreciative faculty in simple ways, proceeding on gradually to the more difficult problems, he is in the line of natural growth. To put together a few straight lines, creating a harmony of movement and spacing, calls for exercise of good judgment and appreciation. Even in this seemingly limited field great things are possible; the proportions of the Parthenon and Giotto's Tower can be reduced to a few straight lines finely related and spaced. Effective progress in composition depends upon working with an organized and definite series of exercises, building one experience upon another, calling for cultivated judgment to discern and decide upon finer and finer relations. Little can be expressed until lines are arranged in a space. Spacing is the very groundwork of design.

Subordination

Neither of the foregoing principles is often found alone as the basis of a single work. Transition, in particular, usually serves to harmonize the parts of a composition. The principle, Subordination, is a great constructive idea not only in the space-arts, but in all the fine arts.

To form a complete group, the parts are attached or related to a single dominating element which determines the character of the whole.

A tree-trunk with its branches is a good type of this kind of harmony; unity secured through the relation of principal and subordinate, even down to the veinings of leaves — a multitude of parts organized into a simple whole.

This way of creating beauty is conspicuous in the perfect spacing and line-rhythm of Salisbury Cathedral, St. Maclou of Rouen and the Taj Mahal; in Piero della Francesca's "Resurrection" and Millet's "Goose-Girl," in some Byzantine designs and Persian rugs.

Notan

Line, Notan, Color — the elements by which the whole visible world is apprehended — may or may not be used as the language of art. Like speech, this three-fold language may voice noble emotions in poetic style, or may subserve the vulgar and the humdrum. Art-language must be in art form; a number of facts, or an incident, accurately described in paint and color, may have no more connection with art than a similar set of written statements — just plain prose. There is no art unless the statements are bound together in certain subtle relations which we call beauty. When beauty enters, the parts cease to have separate existence, but are melted together in a unit.

Advanced composition is only a working out of simple elements into more complex and difficult interrelations. If the picture has figures and landscape, the lines of each run in such directions, intersect and interweave in such ways, as to form a musical movement. The tones and colors are arranged to enrich one another. A noble subject requires noble pictorial style.

[*From "Composition," by A. W. Dow.*]

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Rebuilding the Camera

PHILIP PRESCOTT FROST

AN obsolete camera which has been discarded as worthless may sometimes be turned into a serviceable and fairly valuable machine with the expenditure of a little work and even less money. It was customary to equip the early cameras with good lenses, and there is little about a camera which will wear out.

After several years of a No. 2 Brownie the writer began to desire a larger machine, and an old 4 x 5 box camera in the attic seemed to be the solution of the difficulty. It was built about twenty years ago, for a fifty-exposure film long since off the market, loaded only in the dark-room, and had a clumsy brass shutter which stuck oftener than it worked. It was astonishingly heavy. On the other hand, the lens was an excellent Rapid Rectilinear. There were pictures in existence to prove that it could do

the work, and there was a tradition in the family that the machine had cost much money.

I first attempted to sell it, or trade it in part-payment for a new camera. Approaching the photographer, I set the jewel before him, leather-bound, with tripod and carrying-case as it was, and prepared my mind to refuse an offer of about five dollars. Mr. Smith glanced at it, examined it perfunctorily and shrugged his shoulders. No, he did not want it — not on any terms. He would not even take it in trade.

"My back-room out here is full of old junk better than that. I'll sell you all you want for fifty cents apiece." He had a camera for twenty dollars, however, which he strongly urged me to buy. He also had an excellent camera for twelve dollars. I examined them obligingly and found them both far simpler than my old machine — extremely simple, in fact. I became interested, and, after taking a few measurements, departed for home with the despised relic.

After removing fifteen ounces of brass rods, wheels and springs, and shortening the camera five eighths of an inch, I extemporized a lathe from our sewing-machine and a ten-cent file, and from old parts evolved a winding mechanism which will take an up-to-date, non-curling, daylight-loading film-spool, and wind smoothly onto it. Five inches of an aluminum wire, which I happened to have, made an entirely satisfactory holder for the off spool. Two thin bits of wood and some brads guide the film across the back of the camera. A disc of red celluloid for the window in the back, through which the exposure numbers are seen, cost me five cents. A complete reform was worked in the obstinate shutter (when I had made absolutely sure that it was of brass and not rubber) with about one fourth of a drop of typewriter oil.

When all was done, I loaded the machine with a six-exposure No. 4 film, closed the box, wound the first exposure into position, and went out after game. I had five pictures from the six attempts. I am still using the camera, and do better now. About three years after its rebuilding I was setting it up one day in the Chicago loop to take a picture for an article I was then writing, when a gentleman stopped to watch me. When the picture was taken he remarked:

"They put out some pretty fine machines now, don't they?" I looked up suspiciously, but he was not joking, and when I looked at the old box I was astonished to see how solidly genuine and professional it did look, after all.

The rebuilt camera cost me in time four evenings and a Saturday afternoon—perhaps twelve hours. In money the cost was as follows:

The old camera, present value		$.50
Celluloid for window		.05
Brads, wire, etc., perhaps		.05
Tools: File	$.10	
Scroll Saw	.25	.35
Total		$.95

One day the old camera obligingly posed for its picture, and then with the aid of a couple of mirrors went ahead and took the picture itself. There may be better cameras, but it is safe to say that they cost their owners more money.

WILL HE RETURN ?
RUDOLF DUEHRKOOP

XUM

An Exciting Camera Experience

E. L. C. MORSE

SAID Norris to me: "Why, certainly, old man, any time and any place in the works. Just show this card to the watchman and it will be all right." Norris was superintendent of the Pemberton Iron Works. Opposite the Pemberton Works were the Illinois Steel Works, on the other side of the river. The Sunday before, while eating breakfast, I had seen the Columbus caravels proceed down the lake towards South Chicago. They belonged in Jackson Park and were sent down to the dry-docks only in the winter. This was midsummer. Evidently something was on foot. It was worth investigating. I found them safely ensconced in the Calumet Turning Basin with a watchman on board of each of those ancient tubs. But a good bluff and a couple of cigars will go a long way with most watchmen.

After a few preliminary skirmishes I learned that the caravels were not going into dry-dock. In fact they were going to be towed out into the lake and be "kinematographed." All that new sail was bought and put on by the motion-picture company, and all that ancient armor down there in the after-cabin and all those curious costumes were part and parcel of the show.

Well, no, — decidedly not. The company had not spent twelve months getting the show ready, given a bond to the U. S. Government in the sum of ten thousand dollars for the safe return of the caravels so that outsiders might photograph the function. The landing of Columbus would take place down near the Indiana line and the company had leased the land and no one else would be permitted on the premises. Anybody with a camera — well, they might not shoot him, but they certainly would run him off without ceremony.

The sailors' mutiny and Columbus pointing those old guns down there at them, the conflict on the after-deck and the death of the mutineers — all that had been rehearsed at the company's workshops, but the scene would be acted out on the *Santa Maria* as soon as they cleared the mouth of the river where there would be a good open sea. The tug would cut loose and retire discreetly to the leeward so as to hide its smoke and keep out of the picture. Those gaudy parrots in the cage there would be liberated, would circle about the ship, but, being out on the water, would return to their cages again. The "kine" would catch them flying about the ship. The tug would drop a branch of a palm out in the lake, and retire. The *Santa Maria* would come along and a sailor would reach down and pick it up. All this would be caught by the motion-picture man who would be stationed on a motor-boat at a convenient distance from the Columbus flagship. The discovery of land by the sailor in the crow's-nest would be caught by the machine stationed near the lantern of the lighthouse at the Government Breakwater at the mouth of the river.

"When is all this to take place?"

"Honest, mister, I don't just know. But I heard the boss say the first clear, calm day — a day when the sea was not too rough, but just enough wind to show a few white waves and flap the sails."

The next two days were foggy and I knew that nothing would be doing then. But the third day was clear with a slight N.N.E. breeze that kicked up a few waves.

After breakfast I called up the tug company. The *Hackley* had just started for the basin to tow the caravels out into the lake. I made a break for my camera and the car.

We got across the bridge just in time, and there were the caravels waiting to get through. The captain of the *Hackley* was sweating blood for fear that the *Santa Maria* might swing around and lose a bowsprit on the piling. Never in my life had I seen deckhands bestir themselves so much. One would think those caravels were made of sugar or glass. But they belonged to Uncle Sam, and Uncle Sam is a peculiar old gentleman to deal with; besides, it was nominated in the bond that the vessels were to be returned to the authorities in exactly as good a condition as when received.

But I was rather thankful for the delay. I improved it by starting at full speed for the Pemberton Works. My card admitted me. I hurried down to the dock on the river-bank. A barrel stave was floating down mid-stream. I focused accurately on that. I took out my Watkins and multiplied my time by three to allow for the ray-filter and divided by two to allow for the water and the color of the caravels. F/6 and a couple of extra plateholders with four more ortho plates, if necessary. All ready, let them come!

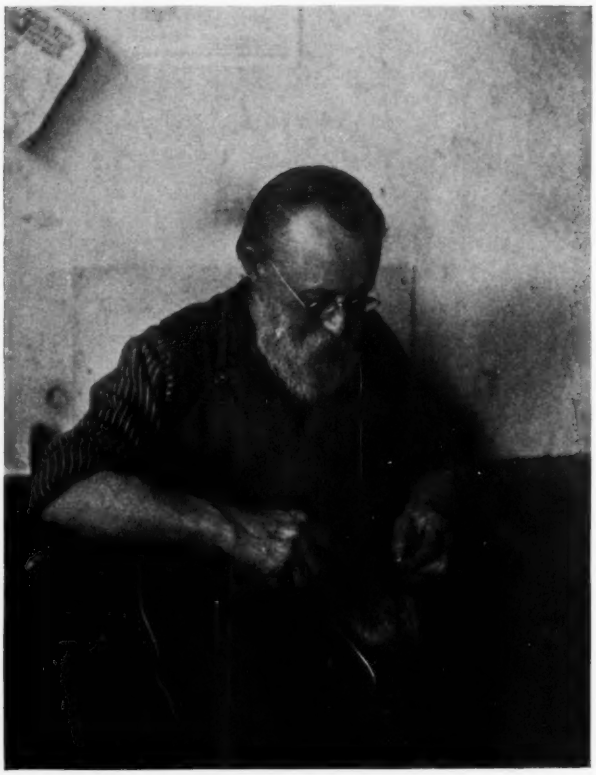
They were just about half-way through the draw when I noticed that the propeller of the big freighter in the opposite slip began to revolve. The *Iroquois* was backing out into the river. The *Iroquois* was an enormous affair and moved very slowly. There was plenty of time for

THE FIRE H. A. HESS

any other boat to pass. Any other boat on the Great Lakes would have slipped by, but not so with Uncle Sam's precious caravels. The captain of the *Hackley* was taking no chances, however remote. He would remain where he was until the *Iroquois* got out of the way. Evidently he had had experience with Uncle Sam before. Not one inch should those venerable tubs move until the river was clear. No Fort Leavenworth for him!

Would the *Iroquois* ever get out? Centimeter by centimeter she backed out, her huge propeller revolving lazily and sucking up the water from the piling below me. She was too long for the width of the river, and the tug at the stern began to pull her up stream. A forward tug was at the bow, ready to swing her nose down stream. She is now about half-way across the stream and the after tug begins that curious see-saw motion that tugs have on such occasions. The greenish-gray water comes swirling towards the dock where I am; they strike the reverse current from the big fellow's wheel and form a miniature maelstrom. I can now almost touch those rusty iron plates as I look in through the open portholes. The after tug is now snorting for dear life, and soon the forward tug's hoarse exhaust is heard down somewhere beyond that huge mass of steel. While she is laboriously swinging into the river preparatory to a voyage to Lake Superior for a few more million tons of iron ore, I study the pictorial possibilities of the situation.

As for pictures of the caravels, I cared nothing for them. You can buy them by the bushel on postcards. But what I wanted to do was to



THE COBBLER W. B. DAVIDSON

make a good picture of the pictorial conjunction of the medieval and the modern. The caravels were historically correct for 1492: exact copies made by the Spanish government for the World's Fair. The crew was togged out in costume and armor either borrowed from museums or manufactured for the occasion with scrupulous correctness. And yet across the river, as a background was a modern, very modern, blast furnace in full operation. The combination of ancient and modern was one to be met only once in a lifetime, and perhaps not even then. The *Santa Maria* with overhanging bow, with unwieldy castle-aft, outlandish yards, low amidships, ancient swivel guns, fierce (and harmless) Long Toms peeping from wooden portholes — and that crow's nest on the mainmast.

Sails, duncolor; hull, a reddish purple; yellow sheerstrakes, light green forecastle and dull green stern. Add to that as villainous a crew of swarthy pirates, picturesque and blood-thirsty (at $3.00 per diem, union sailor wages) and you have indeed a picture.

They are rehearsing the mutiny and you see Columbus in rich purple flowing robe (possibly historically incorrect, but histrionically effective), sword in hand, holding back the mutineers. In the pauses of the groaning of engines, the hiss of steam and the crash of mighty machinery you can hear his measured sonorous tones and the sharp staccato reply of the mutineers.

But the background! There is the contrast that makes the picture. Red hematite ore glistening in the sunlight, huge skeleton arms almost human moving thereon. Iron cars ascending an inclined plane to the top of a furnace, and pausing against the sky-line a moment, descend again, rhythmically followed by others of like errand. Effulgent gleams through brick arches that tell of molten metal that runs like water. Thick yellow smoke over the converting mill where the spiegeleisen is added to a ladle of boiling steel in a gehenna

THE ROLLING MAIN — WILLIAM FINDLAY

of sound and sight, and serenely wafted towards the empyrean, above the clangor and flash and crash, a smoke of rare and strange beauty. What color is it? With apologies to milliners and ribbon-manufacturers I can describe it only as light raw sienna tinged with a faint blue-violet floating lazily seaward.

By this time the *Iroquois* has got straightened out and is proceeding down stream and the *Hackley* is firing up; the caravels are coming at last.

Now it would be possible to take them as they are, a half side view with that horrid bridge and the fire station for a background; but there are several unshapely spiles gashing the picture and the perspective is bad. It is a shame to waste good plates on such an abomination. In five minutes the *Santa Maria* with its yellow sails, blue forecastle, dull purple hull, marvelous crow's-nest and swarthy crew will be abreast of that glistening red ore, dull brown furnace and white lime covered stockhouse. Once more I fix those marvelous colors in my mind as I draw the slide and watch the red hull of the *Hackley* creep down stream followed by her precious freight. It is a masterpiece and it is mine!

* * * * *

"Hey there!" shouts a voice somewhere above me. I look and have just time to grasp the camera and jump out of the way of a string of freight cars which are backing down the dock between me and the river. Oh, those prosaic freight cars! I watch them as they go by — dull, impassive, soulless. They crunch along remorselessly shutting off my vision of the river. Atchison, Topeka & Santa Fe; Chicago, Burlington & Quincy; Union Pacific; Père Marquette; Illinois Central; Nacional Mexicano; Pennsylvania Lines — these were the legends that unrolled themselves slowly before my disgusted eyes. And they were loaded with pig iron, good marketable pig iron — useful and profitable product of modern machinery, but hardly a material that offers pictorial possibilities.

The pig iron train is in no hurry — one cannot imagine pig iron in a hurry; car after car slides by, and between them I catch glimpses of the caravels majestically proceeding down stream in full panoply. The serpentine train of pig halts, starts again, backs up, couples on to cars away down in the yard, reverses its motion and proceeds — calmly, impassively. The groaning engine with hissing safety-valve, its huge piston-rods rhythmically moving winds by and the track is clear. I now have an unimpeded view of the river. It is empty. The caravels are down by the lighthouse, out of the reach of my lens.

XUM

Diffusion and Artistic Modification in Photography

JULIAN NAVEZ

IT was Impressionism in painting that produced the "broad" or "diffusion" school of photography. Seeking after new chromatic effects by the juxtaposition of variously colored points or spots, the impressionist painter had necessarily to neglect the definition of details. Precision of stroke was discarded — it was the epoch of synthesis.

Certain photographic amateurs also desired to introduce the synthetic method into their work, and to attain this object they had recourse to various expedients, such as uncertain focusing, stenophy (printing from a series of colored blocks or plates), and diffusing-screens. One would search in vain, however, among photographic reproductions of the best pictures of impressionist painters for the *total diffusion* that characterizes so-called synthetic photographs.

This complete diffusion, evidently due to the insufficient means employed, is not therefore a product of the peculiar estheticism of the "broad" school of photographic workers. It cannot, moreover, be considered a rational system of definition, even in photography. In fact, for the proper interpretation of a subject those things, that are essential for the artistic expression of a picture, should be defined quite differently from those that are useless or detractive, but which are inevitably present in every photographic view. As the chief points of interest are not always located on the same plane, and, moreover, the principal plane cannot present equal interest in all its parts, it may be said that it is not through any special property of the lens that we must seek a satisfactory and esthetic definition. Besides, the artist who would be satisfied with an inadequate maximum of clearness would by that fact itself weaken one of the chief means of expression given him by the law of contrasts.

To be able to express himself fully, the artist demands tones of as extended a scale as possible from black to white; this desire is also manifested in the opposition of lines and masses and in the gradation of definition from extreme clearness to the most indistinct diffusion.

It has been proposed to utilize the chromatic aberration of simple lenses as an agent of synthesis; but whatever its character may be, it in no wise changes what we have already said regarding photographic diffusion. We know that the blurred effect of the anachromatic image arises from the fact that the focal length of a single lens varies according to the color of the incident rays. Thus the image formed by blue rays is nearer the lens than those formed by the green, yellow and red rays; and if the object is sharply focused on the blue, the image produced by it will be entirely covered by those of the green, yellow and red, which, being larger and more diffused, surround the blue image with what is called, "The chromatic fringe." This fringe, with its regular gradations, gives the image a vapory appearance that is not without charm, but varies greatly according to the chromatic quality of the plate used, the distance from the object and the color of the subject. In fact, a plate sensitive to the blue-violet rays exclusively could not register the chromatic fringe. On the other hand, this will be broader and more distinct the more extended is the chromatic sensitiveness of the plate. As the grading also increases with the nearness of the object, the diffusion of a landscape will be more pronounced in the foreground than in the distance. The lack of homogeneity in the anachromatic image is further noticeable in the sharp definition of those parts of the subject that are pure violet-blue, while bright yellow or orange details are translated by a cottony spot, lacking that skeleton that is said to be characteristic of synthetic rendering.

It should be remarked that the insufficient angle covered effectively by a single lens with large aperture often requires the use of a diaphragm *too small* to permit a deep definition. The advantage of utilizing certain parts of the subject, or limiting it in space as the graded frill limits it in surface, is lost.

I know very well that it is sought to justify the necessity for a very restricted field of view by asserting that it is indispensable in order to avoid exaggeration of perspective. I am also aware that instruments of great focal length are generally recommended for the same object. But while this supposed necessity has been frequently affirmed, it has never been demonstrated. Exaggeration of perspective really arises from the essential difference between the photographic image which is sharp simultaneously and continuously in all its parts, and the image on the retina, which is *successively* sharp in its entirety. This difference is affirmed in all photographs which show a clearly defined *ensemble* which our eye can perceive only successively and with comparative slowness. It is true that in viewing a natural scene there is considerable effort of the eye to accommodate itself to depth, how-

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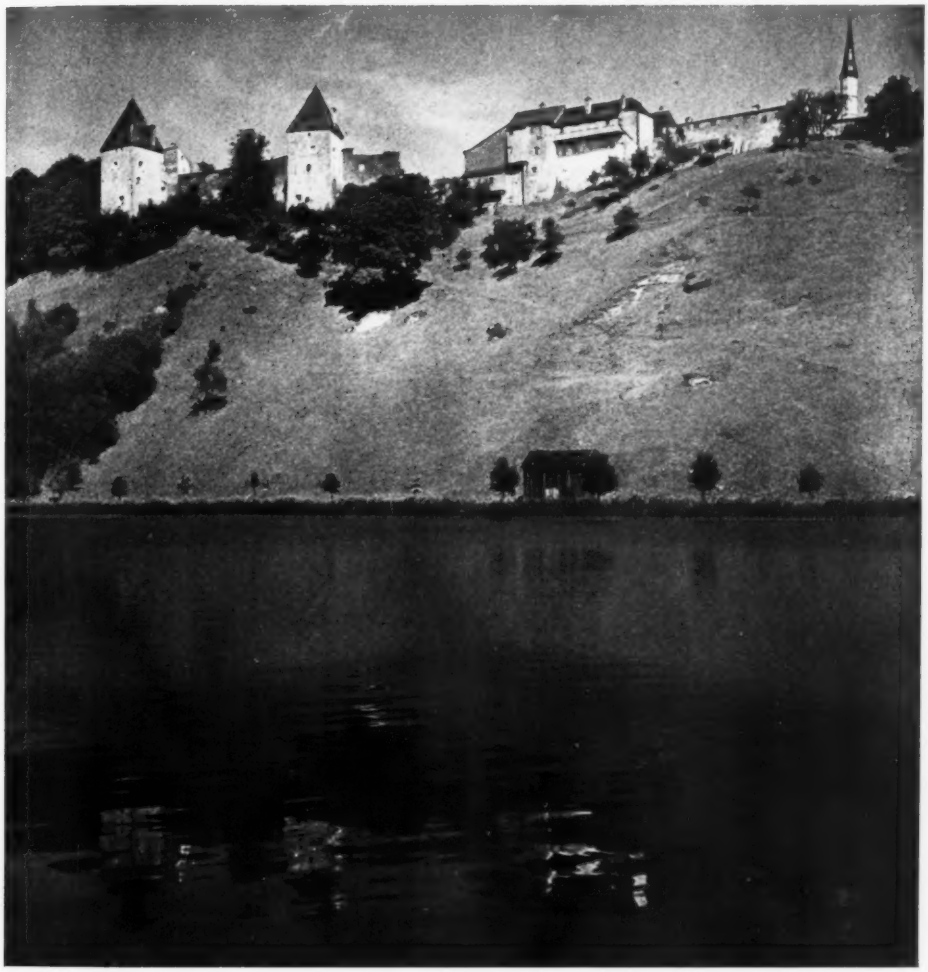

BURGHAUSEN ADOLF EYERMANN

ever unconscious we may be of it, while in examining a photograph there is absolutely none. The angle embraced by the lens can therefore be greater when the object is farther away, and consequently a restricted angle of view is not forced upon the photographer who desires to obtain a true perspective.

Since the accommodation of the eye to depth is exercised more slowly the closer the object is, it is better to avoid taking the foreground on too large a scale if one wishes clearness of definition to extend to the distant outlines. In regard to the relative dimensions of the images produced by two lenses of fifty and ten centimeters focal length respectively, it will be found that an object in the foreground, say at a distance of seven feet, will appear one third of the natural size with the former, while it is only one nineteenth with the latter. It will be readily understood, therefore, that the receding scale in the latter case will be much the truer. I would add that in order to have a depth of field comparable to that perceivable normally by the human eye, it would be absolutely necessary to stop down the lens of fifty centimeters focal distance to the lowest possible point.

To avoid exaggerated perspective, then, the longer the focal length of the lens the farther

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the camera should be placed from the object. From this it may be deduced that a short-focus lens can be utilized in practice more frequently than one of long focus. This should not, of course, lead to the presumption that it may embrace a wide angle. A short-focus objective should naturally correspond to a small image; but a larger angle can be covered effectively with it than with a longer focus.

In practice, account should be taken of the fact that very small pictures require considerable enlargement and the coarseness of the grain of the reduced silver is apt to cause annoyance. Certain operating difficulties also prevent obtaining the best results with very small cameras; most amateurs have therefore adopted the 3¼ x 4¼ size.

The most practical way to copy small negatives is by projection, as in this way the best conditions for examination and control are available. It also offers to the photographer, who believes seriously that diffusion in a picture is a measure of its artistic value, the opportunity to produce the desired effect without difficulty when he considers the original too sharp. For this purpose, an ordinary camera can be arranged without much difficulty, and, after carefully focusing the view on the screen, the enlargement can be modified to any degree of diffusion desired by simply moving the lens. This method is the most rational way to modify the character of a photograph by diffusion, while utilizing negatives whose qualities of definition render them useful for other purposes, particularly as records.

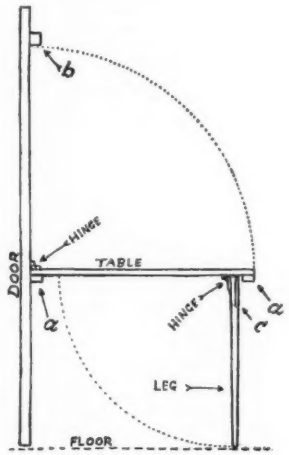
It will be seen from what we have said, that an extra-rapid anastigmatic objective of F/4.5 or F/5 is really universal, as it may be employed to advantage for all kinds of work.

Fotografia Artistica.

Table on Darkroom-Door

J. G. ALLSHOUSE

IN a small studio where economy of space was to be considered, the arrangement of hanging a work-table on the darkroom-door, as here illustrated, was found of value. The table, when folded up on the side of door that is out of sight when closed, takes little space, adding only a couple of inches to thickness of door and, when let down on the work-room side when door is open, it makes a convenient table for mounting prints and doing other work. It can also be used at night to hold printing-frames, paper and mats when printing and developing by lamplight. Make the table two inches smaller than width of door, in order to clear the door-stops; use five-eighths or seven-eighths inch boards and make it two feet ten inches, or three feet long, and put it about two feet four inches from floor. Put two cleats, one by two inches (aa) on the under-side even with the ends, also one cleat (b) two by two inches on the door, to which fasten table when raised up. Make the two legs of one-inch square stuff, tapered down if desired, and put a three-eighths by five-inch crosspiece (c) across, mortised into front of legs, as shown. Hinge the legs just back of the front cleat, and hinge the table at back end to the door; you can use T, strap or door butt hinges and screw on flat to save time. Put a cupboard catch on the under side of table in middle of front with keeper on cleat above on the door, to hold table and legs flush with the cleat on door when raised up, the table and legs folding as indicated by dotted lines and hanging close to door. If door-knob interferes when table is raised, cut a hole in table the size of the knob or catch.



You can slope the top of legs a little, so that they will lean out slightly and prevent being too easily knocked in when table is down. A better plan, of course, would be a light folding brace, which could be added to the table, like the leaves of a dining-table.

The Application of Photography to the Registry of Legal Documents

HENRY LEFFMANN

MR. BARTLETT'S communication leads me to refer to a paper presented by me some years ago at a meeting of the Franklin Institute, Section of Photography and Microscopy, advocating the substitution of photographic processes for the tedious and inaccurate methods of copying now in vogue in the registry bureaus.

Of late, typewriting has been substituted for handwriting. This is a gain in legibility and speed, but is still far from ideal, as the dangers of inaccuracy are not wholly eliminated, and the important item of signature is uncared for. The subject seems to be worthy further discussion.

The transfer of real estate, under which term (disregarding legal hair-splitting) we may understand land and the buildings thereon, has always been a matter of some difficulty and complexity. In many times and places land was and is practically inalienable. Even now, in the most enlightened nations, the legal fiction is that all land belongs to the supreme authority; that is, the crown in such a country as England, and the State in such a country as our own. Upon this principle rests the right of eminent domain which the State sometimes exercises in its own interests and sometimes confers upon corporations. Land being irremovable, the occupancy of it is not evidence of ownership, and it is impossible to conceal its existence. As it is the only natural monopoly it is the foundation of all wealth in the strict sense of that word. If we carefully analyze the transactions of both nations and individuals, we will find that a common impulse of humanity is that of land-grabbing, whether it be by conquest of a Joshua or a Cæsar, or the "benevolent assimilations" of our own age and country.

The enlightened nations of the present day differ considerably as to the amount of land-transfer and the methods of accomplishing it. We are so accustomed in this country, and particularly in this city, to the public record of deeds, mortgages and judgments and to the publication of names of sellers and buyers, and even of delinquents, that we are astonished to learn that this is not by any means universal, and in some places quite against the will of the community. Some notable contrasts are to be found also among what are considered happy countries, in regard to the distribution of land ownership. Thus it is stated on good authority that the average number of land-transfers annually in France is about 800,000, while the total number of land owners in England is only about 200,000, so that for England to have as much conveyancing business as France, would require that each English owner should make transfers four times each year.

In Philadelphia the exact extent of the business is not easily obtainable, but by inquiry at the office of the Recorder of Deeds I learn that in the record work about 400 books are filled each year, each book containing 560 pages of the size of the large counting-house ledgers. This will make nearly 250,000 pages per year. These books contain principally deeds and mortgages, about an equal number of each; releases, powers of attorney and some other documents affecting property make up the remainder. To make these copies, which are expected to be word for word, a large force of transcribing clerks is maintained.

Mr. J. W. Ridpath kindly ascertained for me the statistics of two of the adjoining counties for 1900, as follows:

Montgomery County, 5,548 documents, 12,000 to 14,000 pages.

Bucks County, 2,684 documents, 5,210 pages.

Another very important record department is that of the Register of Wills. It is the rule, I think, to preserve the original document and furnish to interested parties a certified copy. The original may be seen by anyone. These methods are obviously open to the same objections that apply to the transcription of deeds and mortgages, with the additional one that as the original is open to inspection it is likely to be injured. The number of wills registered in Philadelphia in a year is considerable. A lawyer of this city told me that a will was filed in a city of western Pennsylvania, of which three official copies were furnished by the register's office, and all the copies differed, although all were duly certified as exact.

It must be apparent to every one that transcriptions by hand are at best clumsy. The Philadelphia departments are in good repute with attorneys, but even under the most favorable circumstances there is considerable delay in the recording of an instrument. This does

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TWILIGHT AFTER THE SHOWER W. H. ZERBE

not operate to the disadvantage of parties, since the instrument takes effect at the moment it is presented for record. The possibilities of error in transcription must always be in mind, although here, again, there is less risk, because the original document is returned to its owner and this document is always the best evidence.

When the systems of transcription were inaugurated, the possibilities of photography were not only unknown, but were quite unsuspected. At the present day the art of duplication of writing or drawing has been brought to high degree of perfection. As noted by Mr. Bartlett, the work is not confined to the copying of the well-made originals consisting of black lines on a white ground ; even old yellow manuscripts on parchment can be reproduced with vividness not appreciably inferior to the originals. Lead-pencil writing on common white paper can be well reproduced.

Briefly, I propose that for all documents which are to be copied for record, a negative shall be made either of full size or somewhat reduced, if thought permissible, and from the negative prints shall be made by the best processes. The negatives are not to be kept, hence the same glass can be used a number of times. The paper must be of the best quality, particularly as regards its resistance to decay. There is nothing in the problem that is uncertain or indefinite. Photography of this character can be carried out independently of the weather or time of day ; permanent pictures can be made, and control can be exercised over the work at all points. With regard to wills, I propose that, even if it be thought necessary to keep the original document, the public should be allowed access only to the photographic copies, which should be bound in indexed volumes. To facilitate the work, some method of drawing up legal documents may be laid down, such as standard size of sheet, character of ink, and other details ; but I am informed by an attorney that recording officers would, under present laws and customs, probably be obliged to accept for record any legible document, so that very close requirements would probably be impracticable at first, and as far as wills are concerned of course impossible. However, whatever the eyes can read, the camera also can read, and there will be no practical difficulty on this point.

A special advantage in the photographic method lies in the fact that the copy can be made much smaller than the original, without sacrifice of legibility. This will enable a much larger number of copies to be stored in a given space. One of the most serious problems now before keepers of records of any kind is the demand for space, and when from the very nature of the records the storing space should be proof against fire, water and vermin, the cost becomes burdensome. By reducing the copy to a quarter-size of the original, which can be done with perfect preservation of legibility for all practical purposes, and by using paper much thinner than that of the original, important practical advantages are obtained. — *Journal of the Photographic Society of Philadelphia.*

EDITORIAL

Incongruous Backgrounds

WHEN the pillar, draperies and other hackneyed incongruities of the old-time photographer's studio were, at last, relegated to the past, great was the satisfaction among the advocates of good taste in portrait-photography. But these good people were destined to endure for many years another inartistic accessory—the artificial background. Generally this took the form of a landscape, a marine-view or an architectural design.

At first the artistic appearance of these painted screens left much to be desired; but gradually this defect was remedied, and of late years the character, design and execution have been eminently satisfactory. In many present-day portraits, however, and particularly in those made in the home of the sitter, the background is transformed into one in accord with the photographer's fancy, by being worked in on the negative. The artistic appearance of these created backgrounds depends entirely on the skill and taste of the photographer, and in many instances the results are admirable in design, workmanship and effectiveness. Generally, however, they offend the artistic sense by a lack of truth and fitness. A portrait bears all the evidence of concentrated lighting—having been made indoors; and yet the view behind the sitter represents a landscape in all its frankness and beauty of design, when a background neutral in character, or suggestive of the home, would seem to be more desirable. If for some reason a landscape must serve as the background, the experienced photographer can easily arrange his light—if properly equipped—or he may retouch the negative, to create the effect of an open-air pose. In trying to match the illumination of the background, he will take care that the direction of the light is uniform throughout.

The photographer with a passion for applying, without discrimination, an artificial open-air background to a studio or an at-home portrait, may quote as authority for his practice the masters in painting, old as well as modern. It is true that portraits by artists from the renaissance to those of our own day appear with backgrounds of natural scenery, the obvious intention being to enhance the beauty of the picture, according to the caprice of the artist or, may be, that of the model. La Gioconda (Mona Lisa), by Da Vinci—which has mysteriously disappeared from the Louvre—showed a distant landscape of rather imaginary beauty, but in perfect harmony with the personal charm of the sitter. A portrait of Charles V, by Titian, represents that monarch seated on a balcony against the orthodox pillar and curtain, and glimpse of a conventionalized landscape. A picture, about one hundred years later, by Rubens, portrays Helen Fourment and her little son with a similar setting. A portrait of the same period, by the elegant Van Dyck, represents Lord Wharton, youthful, handsome and gorgeously costumed, standing against an harmonious combination of curtain, rocks and trees. Portraits painted by Sir Joshua Reynolds, one and a half centuries later, are mostly executed with straight, open landscapes for backgrounds; but, in his picture of the Duchess of Devonshire and her baby daughter, the latter only is posed against a fragment of smiling landscape—a peculiarly happy touch. Sir Joshua's illustrious compatriot, Thomas Gainsborough, achieved, about the same time, his magnificent portrait of the Hon. Mrs Graham. The beautiful model is posed against the base of a classic column—a foil to her graceful figure—and a somber landscape sets off the magnificent costume. In his well-known Lansdowne portrait of George Washington, Gilbert Stuart also utilized the traditional combination of column, curtain and prospect; and, among the painters of the present day, John Sargent frequently portrays his sitters against an open-air background, the light throughout being well diffused.

Hundreds of additional examples can be cited, in which the models are posed indoors and against a setting of natural scenery, but in all of them the lighting is consistent and truthful. Such rugged painters as Michelangelo, Velasquez, Rembrandt and Frans Hals almost invariably eschewed decorative backgrounds and portrayed their sitters against a plain setting; but the lighting in all of these studio-portraits is characteristically harmonious. The photographer, disposed to be consistent, will see to it that the scenic background, whether ready-made or to be created on the negative, agrees with the lighting imparted to the sitter and, if possible, with his character and personality. Or the artist may prefer to introduce a setting of some original, fanciful design.

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HONORABLE MENTION — CATS AND KITTENS

"TIGER." MRS. L. A. CULBERTSON

THE RUNT. D. V. SMITH

THE SONG OF A BIRD. NICK BRUEHL

"WHAT'S UP?" ARLO E. GURNSEY

THE WHITE CAT. T. W. KILMER

A LITTLE MUSIC. MRS. WM. DURRANT

LOG CABIN PARK CAT. R. D. MURRAY

PLAYMATES. HARRY ADAMS

"JUST WE THREE." VERN R. HUFF

THE ROUND ROBIN GUILD

An Association of Amateur Photographers

Conducted by KATHERINE BINGHAM

This association, conducted under the auspices of PHOTO-ERA, and of which PHOTO-ERA is the official organ, is intended primarily for the benefit of beginners in photography, although advanced camerists are just as welcome and many are numbered among its members. The aim of the association is to assist photographers by giving them information, advice and criticism in the Guild pages of PHOTO-ERA and by personal correspondence. Membership is free to subscribers and all regular purchasers of the magazine sending name and address to PHOTO-ERA, The Round Robin Guild, 383 Boylston Street, Boston.

Spring-Scenes

THIS is spring-time, and evidences of the season greet the eye and ravish the ear of the nature-lover. As we noted on a similar occasion: "Everywhere is seen the renewing of life. Under the combined magic of sun and rain, the sere, brown hills are rapidly changing to emerald. The trees are donning a misty covering which, in a few weeks, will become translucent green. Soft, fleecy clouds drift across the sky, which is of that delicate blue of which poets love to write. The first frail blossoms of the year begin to carpet the woodland, and "birds are singing in every bush."

The camerist rejoices with the feathered harbingers of spring, glad to be in the open air and to enjoy the fragrant breezes, the flitting lights and shadows, the awakening of forest, brook and field. Years ago it was customary to refer in poetic strains to the camera which had lain on the shelf, accumulating dust during the long winter-months, and, after a long rest, was now being taken by its enthusiastic owner into the woods and the fields. This sentiment is beautiful; but loses none of its charm because the photographer has learned how to use his equipment in home-amusements during the interim of fall and spring, and is glad of the opportunity to procure new material in Nature's vast storehouse.

There's many a beginner, who, through practical experiences, after long and serious deliberation, has acquired an improved field-camera which he is eager to give a trial; or he has been pursuaded to experiment with a type of lens new to him. We note, too, the student who is interested to see how the rules of composition, balance and harmony will operate in actual practice; for did he not at the Editor's suggestion acquire a number of pictorial annuals in order to admire and emulate the achievements of noted artist-photographers? Another amateur has studied books on the photography of birds, how to record successfully their habits in nest-building, in caring for the young, and other activities. To engage in such work requires special apparatus, ingenious devices and the exercise of vigilance, tact and skill. We must not forget the worker, who, from necessity or the pleasure of it, constructed his own camera. He, too, has been impatiently awaiting an opportunity to test the efficiency of his handiwork.

There are many more — they may be numbered by the thousands — who are actuated by laudable motives to rush with camera into Nature play-grounds. The squirrels and the birds, high among the tree-tops, are startled by an ominous sound. Is it the hunter cocking his gun? There is not need for alarm; for it is but the harmless click of the camera-man — a friend and not a foe. He is in search of an April landscape, with its evanescent and ever-changing beauty. Now and then he stops to survey with a critical eye a group of early spring-flowers, which, if the light is right, he proceeds to make his own. If he is not sure of his botanical knowledge, he consults his pocket flower-guide, which he was wise enough to take with him. The brook, whose rippling music has caught his ear, now arrests his attention. At this season its waters are copious, and it hurries swiftly along its course among soft banks, issuing from the gentle wood out into the meadow where in a sinuous line it flashes its way till lost to view. On the lookout for pictures thus afforded, the camerist may not be aware that subjects of another sort, equally grateful, await his favor. Beyond the meadow in a field is a plough-man turning the soil. He is shouting to his horses and cracking his whip; but these sounds fail to impress the camera-man, absorbed as he is with views of spaces and perspective. To-morrow, with fair weather, they will surely make their presence known — unless our friend has been lured elsewhere. But see! Another camerist is seen advancing from the opposite direction; he notes the pictorial possibilities, and prepares for serious work. The new-comer has completed his task and, prospecting in the neighborhood, discovers a farmer spading the ground for early vegetables — welcome material for his omnivorous camera. There are other scenes of activity about the farm, occasioned by the advent of spring, and, unless the ammunition of the camerist is exhausted, more prizes are added to his film-case.

But it is not necessary that the city-man should confine his expressions of spring to the country. He will find pictorial indications of this season within the city limits. Boys playing marbles in the streets, young Caseys at the bat, and girls skipping rope provide suitable material of a pleasing character. Besides, a glance through back numbers of PHOTO-ERA, which contain pictures descriptive of spring, will suggest to the Guilder contestant many appropriate subjects for the entries to "Spring-Scenes," which competition closes May 31. They must be typical of the spring-season, and proclaim their true character in no mistaken manner. Originality of design in composition, sentiment and expression, combined with good workmanship and artistic treatment, should characterize the contributions to this competition as well as to all others that follow.

A Home-Made Lantern

J. G. Allshouse

IT is not always convenient to light your darkroom by admitting daylight through a screen of colored glass or fabric, and even in daytime it is better to use artificial light, because the varying intensity of daylight makes it difficult to judge the density in obtaining uniform negatives. The cheaper forms of ruby lamps, however, are not at all satisfactory for the working of developing-papers; and a large, well-made lamp that gives a strong enough light for printing and affords plenty of good, safe light for developing prints, is quite an expensive item.

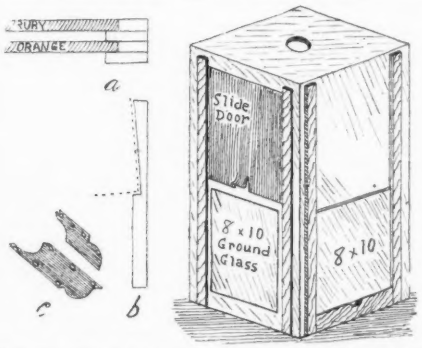
XUM

A STEADY GAZE HONORABLE MENTION — CATS AND KITTENS FANNIE T. CASSIDY

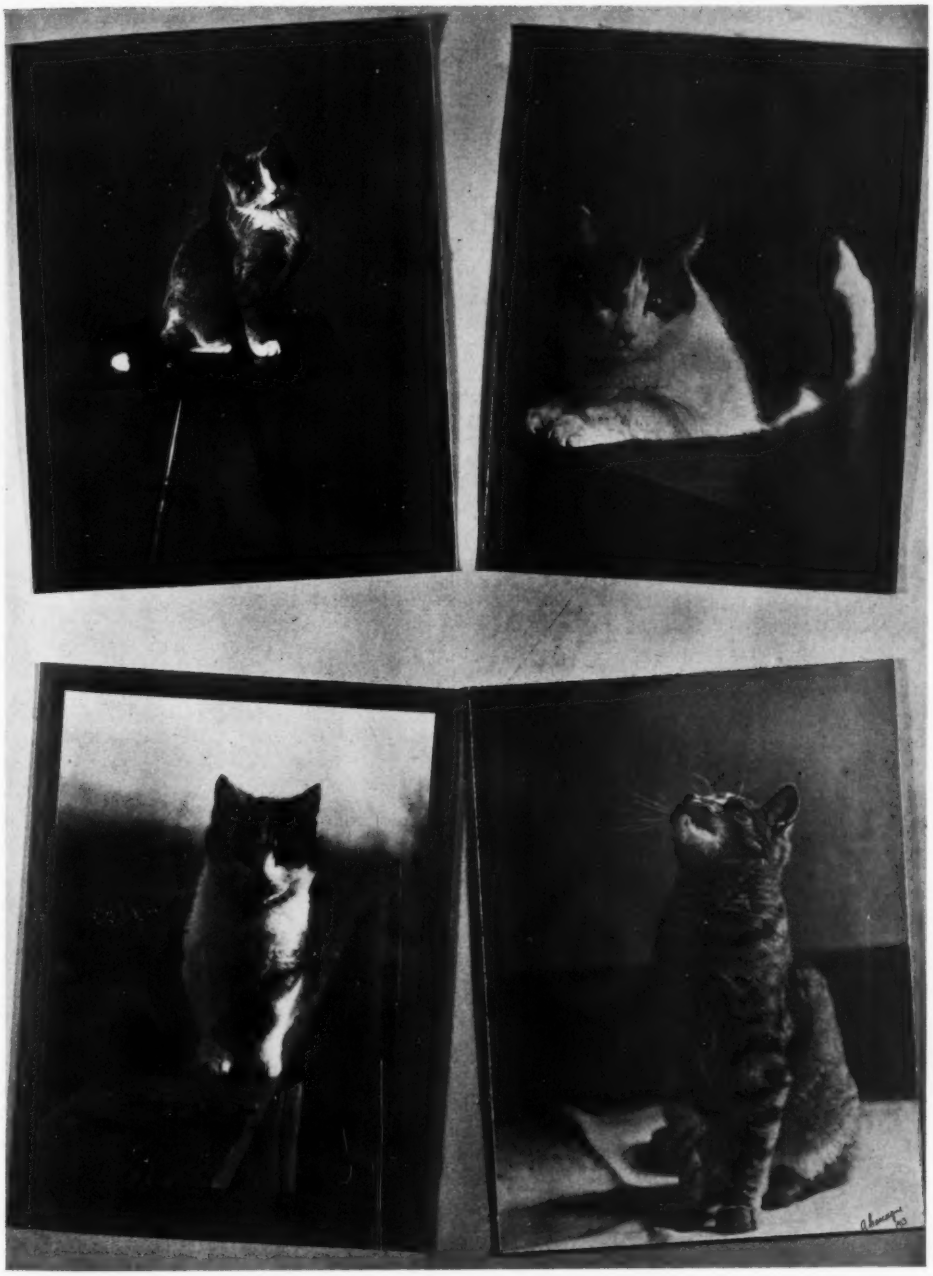
The darkroom-lantern, here illustrated, you can make easily at a trifling cost, and it will be better in many respects than the most expensive one you could buy. Get a light wooden box, about 1 foot square and 1½ to 2 feet long, or make one of thin boards. In the lower half of one long side, cut an opening 7 x 9 inches; in the left-hand side another 7 x 9 opening, and in the right-hand side a somewhat longer opening — say, 7 x 13 inches. This right-hand opening is to admit an ordinary oil-lamp and chimney. Put upright, grooved strips at sides of the three openings. For the front, use four strips of ⅛ inch or thinner wood at each side, arranged thus: first a ¾-inch wide strip next to box, then a 1-inch wide strip, another ¾-inch wide, and another 1-inch wide. In the cut, *a* shows end of strips and the ¼-inch grooves made. In groove next to box, put a piece of 8 x 10 ruby glass; in the second groove, a piece of 8 x 10 orange glass. Each glass slides up and down over the opening. Half way up in each of the right-hand ¾-inch-wide strips, cut a sloping groove and notch, as in *b*; the glass can then be raised by introducing the fingers under it, and, tilting the bottom edge to rest in the notch, will remain raised. The two pieces of glass can be used in combination, or separately, over the opening; or both may be left up if unobstructed white light is wanted.

Over left-hand opening place an 8 x 10 ground glass, the ground side next to light — for examining negatives and prints while fixing, and for lighting the worktable with subdued light. Have a piece of sheet iron or black cardboard to slide down over it when you do not want the white light. Over right-hand opening, have another light-proof sliding door through which you can reach the lamp to regulate the flame. The grooved strips for these slides can be more simple than those for the colored glass.

For ventilation cut a 3-inch opening in center of top and a number of small holes in rear of box near bottom; over these openings, inside of box, tack a piece of black tin or sheet iron about 6-inch square, bent and shaped as in *c*, to prevent the escape of direct or reflected light. If the grooved strips are too thick and light escapes at top of glass, put a strip of cardboard behind first glass at top of opening. Use any glass oil-lamp with low-down burner, and flat bowl; of course the better burner



(flat or round wick) you can use in a lamp that will suit the space, the better for printing developing paper. You can increase the light by putting a piece of bright tin behind lamp. When printing, raise both glasses and, after exposing, lower the orange glass which will give a large volume of safe light for developing paper; for developing negatives, turn down the lamp and use the ruby or both glasses.



HONORABLE MENTION — CATS AND KITTENS

"FLUFFY." L. M. REIGHTMEYER
"SMUDGE." CARL H. BROWN
"PRETTY BOY." H. G. PHISTER
"KITTY GRAY." A. GASCOIGNE

XUM

The Round Robin Guild Monthly Competitions

Closing the last day of every month.
Address all prints for competition to PHOTO-ERA, *Round Robin Guild Editor, 383 Boylston Street, Boston, U.S.A.*

Prizes

First Prize: Value $10.00; *Second:* Value $5.00; *Third:* Value $2.50; *Honorable Mention:* Those whose work is deemed worthy of reproduction with the prize-winning picture, or in later issues, will be given Honorable Mentions.

Prizes may be chosen by the winner, and will be awarded in photographic materials of any nature sold by any dealer or manufacturer who advertises in PHOTO-ERA. If preferred, the winner of first prize may have a solid silver cup, of original and artistic design, instead of supplies.

Rules

1. These competitions are free and open to all members of the Round Robin Guild.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P. or black-and-white paper having the same gradations and detail.

3. The right is reserved to withhold from the competitions all prints not up to the PHOTO-ERA standard.

4. A package of prints will not be considered eligible unless return postage at the rate of one cent for each two ounces or fraction is sent with the data.

5. Each print entered must bear the maker's name, address, Guild-number, the title of the picture and the name and month of the competition, and should be accompanied by a letter SENT SEPARATELY, *giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in letter.*

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

7. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15 unless they are packed with *double thicknesses of* ***stiff*** *corrugated board, not the flexible kind, or with thin wood-veneer.* Large packages may be sent by express, Section D Rates, very cheaply and with indemnity against loss.

Subjects for Competition for 1913

February — "Flashlights." Closes March 31.
March — "Architectural Subjects." Closes April 30.
April — "Spring-Scenes." Closes May 31.
May — "Park-Scenes." Closes June 30.
June — "General Subjects." Closes July 31.
July — "Wild Flowers." Closes August 31.
August — "Marine-Studies." Closes September 30.
September — "Shore-Scenes." Closes October 31.
October — "Rainy Days." Closes November 30.
November — "Christmas Cards." Closes December 31.
December — "Home-Scenes." Closes January 31.

Awards — Cats and Kittens

First Prize: Mrs. Alice F. Foster.
Second Prize: William S. Davis.
Third Prize: Paul R. Morrison.
Honorable Mention: Harry Adams, Carl H. Brown, Nick Bruehl, Ward E. Bryan, Fannie T. Cassidy, Mrs. L. A. Culbertson, Mrs. Wm. Durrant, Mrs. Genie Galerno, Romuald J. Garneau, Arlo E. Garnsey, A. Gascoigne, Vern R. Huff, T. W. Kilmer, Paul P. Kimball, Frank E. Ludlum, Aloys Maerz, Katherine McManness, R. D. Murray, Harry G. Phister, L. M. Reightmeyer, Henry J. Schulz, Anna M. Shurtleff, D. Vincent Smith, Oliver T. Waite, Wm. N. White.

Monthly Contests for Beginners

In these contests all Guild members are eligible PROVIDED THEY HAVE NEVER RECEIVED ANY PRIZES OR HONORABLE MENTIONS *in the past,* FROM ANY SOURCE, AND PROVIDED ALSO THAT THEY HAVE NOT BEEN MAKING PHOTOGRAPHS MORE THAN ONE YEAR.

All prints submitted, except prize-winners, will be returned if postage is sent in a separate letter with the data. The rules on opposite column apply here.

Prizes

First Prize: Value $5.00. *Second Prize:* Value $2.50. *Third Prize:* Value $1.50. *Honorable Mention:* Those whose work is worthy will be given Honorable Mention.

Subjects for each contest is **"General"**; but only original prints are desired.

Special Prize-Competition For Hand-Colored Photographs

To encourage the fascinating pastime of coloring photographic prints, PHOTO-ERA offers a series of prizes, aggregating $22.50, for the best three hand-colored pictures.

CONDITIONS

1. The contest is open only to *amateur photographers* — beginners and advanced workers — who live in the United States of America. Professional and semi-professional photographers are not eligible.

2. The subject to be colored, size, and style of coloring are at the discretion of the contestant; but it must be a print upon any sensitized photographic paper.

3. The colors must have been deposited with the aid of the brush. Watercolors in the form of cakes, tubes, bottles, sheets or stamps should be used.

4. The work of coloring, as well as all the photographic work, including print, must be by the contributor.

5. Pictures awarded prizes or Honorable Mention become the property of PHOTO-ERA.

6. All prints not receiving a prize or Honorable Mention will be returned to the senders, if fully prepaid and accompanied by full amount of return postage at the rate of one cent for each two ounces or fraction thereof.

7. Contest closes May 15, 1913.

AWARDS

First Prize	$10.00
Second Prize	7.50
Third Prize	5.00

Next three in order of merit will receive a prize of $2.00 each.

Prizes will be awarded in photographic materials of any nature advertised in PHOTO-ERA, to be selected by the winners.

A WINTRY PROSPECT
FIRST PRIZE
CATS AND KITTENS
ALICE F. FOSTER

Answers to Correspondents

Readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Guild Editor, PHOTO-ERA, *383 Boylston Street, Boston. If a personal reply is desired, a self-addressed, stamped envelope must be enclosed.*

F. O. — No; **prints for reproduction-purposes** need not be on glossy paper. A smooth surface, any matte Velox or smooth platinum in black and white with good contrast is acceptable.

F. M. D. — In using **flashpowders**, a certain degree of precaution is necessary. Directions how to handle safely this inflammable compound have been frequently printed in PHOTO-ERA; but the Editor is always ready to advise how accidents in flashlight-work may be avoided. The directions which accompany each bottle of "Agfa" Blitzlicht powder are worth remembering.

Do not smoke, lest a spark should fall on the powder.

Always cork up the bottle immediately you have taken out the necessary quantity.

Fire it at a respectable distance from curtains or highly-inflammable hangings, remembering that the flame reaches a considerable height.

Alway fire it as a loose heap, and do not enclose the powder in anything.

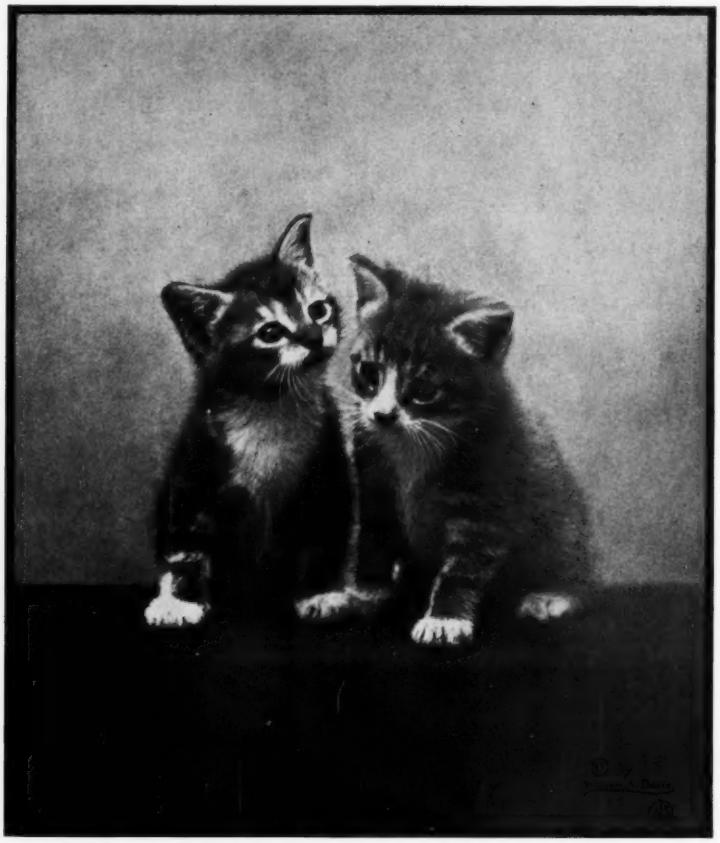
On no account attempt to fire it in any description of magazine-lamp, or blow it through lamp.

Supposing the firing does not take place and the touch-paper appears to have gone out :

Do not stir up the powder with your fingers, or bend over it, until quite certain there is no danger of ignition.

Agfa Flashpowder will not explode by friction or concussion ; it requires an actual spark.

Do not attempt to light the powder with a short wax taper held in the hand.



CONFIDENCES

Copyright, 1913, Wm. S. Davis

SECOND PRIZE — CATS AND KITTENS

P. R. — A probable cause of the **discoloration** or **fading** of your **gas-light prints** is imperfect fixing. When prints are left in the fixing-bath without being kept in motion, the center prints, being protected from the action of the bath by the prints above and below, may cause trouble. When one is not certain that all prints have been properly fixed, a wise precaution is to put the whole lot through a fresh, strong bath before washing.

E. F. — The **uneven density** of your plates may be caused by uneven drying. If the temperature is suddenly changed during drying, a difference in density will result. It is sometimes a temptation to hurry a plate by putting it in a warmer place to finish drying; but the temptation should be resisted, or trouble will follow. The plates can be soaked and redried without showing the lines.

C. A. T. — **Dr. Eder's Chromium Intensifier** seems to be on the German Market, but not obtainable in the States. A tabloid Chromium Intensifier is put out by the Burroughs Wellcome Co.

F. G. H. — The discovery of the **X-rays** resulted from the accidental observation made by Professor Wilhelm Conrad Roentgen, of the University of Wuersburg, that certain crystals, in the vicinity of a vacuum tube with which he was experimenting, glowed with a phosphorescent light, even when opaque substances were interposed between the tube and the shining crystals. Further experimenting showed that the tube was giving off a radiation which, though quite invisible to the eye, had the power of affecting photographic plates, and passed through flesh and bone, metal plates, blocks of wood, and practically all opaque substances, almost as readily as light passes through a sheet of glass. Robert Williams Wood, discussing the X-ray as one of the seven wonders of the modern world, in *Popular Mechanics Magazine*, says: "As it happened, I was engaged in graduate study at the University of Berlin at the time the discovery was made, and one morning, as I passed through the laboratory, one of the junior professors called out to me, 'Oh, come in here and see the pictures; they are most extraordinary, and were made with a new kind of ray which Roentgen has discovered.' Together we went into one of the smaller laboratories, where, hanging on the wall, was a row of radiographs, such as we are now familiar with, but which at the time were perfectly startling." The dangers of the X-ray have been realized at the cost of the arms of experimenters.

THE FIRST OUTING THIRD PRIZE — CATS AND KITTENS PAUL R. MORRISON

Print-Criticism

Address all prints for criticism, enclosing return postage at the rate of one cent for each two ounces or fraction thereof, to Guild Editor, PHOTO-ERA, *383 Boylston Street, Boston. Prints must bear the maker's name and address, and should be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop used, exposure, developer and printing-process.*

D. J. W. — Your attempt to portray a group of persons dressed in the costume of the time of the American Revolution is praiseworthy; but the result is not entirely satisfactory. The interest of the sitters is divided; some faces are turned in one direction, some in another. The expression on the faces shows that very few of the models are in sympathy with the topic of the moment. Besides, the columns — an important architectural feature of the apartment — are violently tipping to one side, and the chandelier is also out of perpendicular, proof that the camera was not level. Trimming will scarcely improve this picture.

M. J. P. — "On Guard." Had the picture been taken as a horizontal rather than as an upright, a better perspective of the street would have been obtained. The horseman is too centrally located. His position should have been more to the right, having a larger space in front.

MRS. H. B. D. — Your photograph entitled "The Cadets" is marred by the pole which cuts the picture in half; and the lines show distortion from pointing the camera downward.

R. L. B. — Your sunset picture is very beautiful, and a good example of circular composition; the lack of detail in foreground trees only helps to carry out the evening effect. In "Live Oaks" you have very pleasing composition in line, which is greatly improved by trimming one inch from the top, thus doing away with halation and ugly line of branch. "Winter Woods" is a very successful winter picture, improved by trimming three-quarters of an inch, throwing the path a little out of center and removing tree which leans out of picture at right.

J. P. H. — Your position on the sidewalk has confused the perspective and the halation about the lights would indicate too long exposure. Perhaps a softer working paper would give better results.

MRS. G. G. — As a portrait group, "At Lunch" is not unsuccessful, though the figure at right shows some distortion from being too near the lens. A longer exposure would have given better detail both in highlights and shadows.

A. M. W. — In "A Busy Corner" the focus should have been on foreground group, which is now more indistinct than the clock in distance. The projecting balcony in upper left is unfortunate, but cannot be trimmed off without loss to the picture.

M. R. G. — Your picture entitled "A Colonial Day in School" is a very interesting and well thought out composition, its chief fault being a division of interest between the two groups, either one of which is a picture in itself.

A. S. — "The Day's Beginning" has much of the early morning feeling and is of real pictorial value. Trimming from the right to take off first pole improves composition.

A. A. B. — Technical work on print submitted is excellent and composition good with the exception of a very heavy and confused foreground. Trimming seven-eighths of an inch from the bottom and one-quarter of an inch from left greatly improves the picture.

M. V. — A gray effect similar to that in the print submitted may be obtained by giving long exposure and short development; or by using a soft working paper like soft Azo.

XUM

OUR ILLUSTRATIONS

Edited by WILFRED A. FRENCH

MANY of our readers will recognize W. B. Morrison's beautiful picture, "The Willows," which, as this month's initial illustration, proclaims the month which inspires the poet's muse. It was awarded second prize in the "Spring-Pictures" competition, August, 1911. Data: April, 11 A.M.; light dull, about to rain; rear combination of a Goerz, series III., 14-inch focus; stop, F/12; ray-filter; ¾ second; Cramer Medium Iso; pyro; gum-print. Those interested in the process of gum-printing are referred to Mr. Morrison's article "Notes on Gum-Printing," PHOTO-ERA for September, 1911.

The pictures illustrating the pictorial ability of Harry D. Williar, which have occasionally appeared in PHOTO-ERA, have been landscapes. Of recent years this successful worker has engaged in portraiture and genre. An admirable example of the latter is this month's frontispiece. As regards the beauty of the model, there can be but one opinion; and one cannot deny that the pose and the lighting have been managed exceedingly well. Harmony is the keynote of this attractive picture, and the artist deserves warm praise for having avoided successfully the least tendency towards harshness in the drapery and the flesh-tints. The values throughout are true, and the lines, with the exception of a fragment of the settee, at the right, are easy and graceful. Data: 10.30 A.M.; window-lighting; Hammer plate; M. Q.; Vesta lens; 9-inch focus; stop, F/5; 8 x 10 Cyko print enlarged from 4 x 5.

W. W. Klenke displays marked talent as a draughtsman in his original illustrations to his article on plaster-casts. The design, page 161, has been ingeniously elaborated from a photograph of Michelangelo's sculptured group, "Morning and Evening," in the Medici Chapel, at Florence. Mr. Klenke's success as a photographer of statuary was adequately shown in his picture, "The Bather," which won a prize in the "Copying Works of Art" Guild competition, and was reproduced in the June issue, 1911. His photograph of "David," page 163, was made merely for the purpose of comparison, and is not worthy to be considered as a pictorial effort.

The picture of "David," page 165, is not an interpretation, but rather a technically perfect record by a thoroughly competent professional, E. A. Cleaveland, who photographed the principal casts at the Caproni works, for the firm's voluminous catalog. Besides displaying the comparative merits of an exemplary plaster-cast, this photograph demonstrates the value of a department of commercial photography which suffers for the lack of genuine experts. Members of the American Federation of Commercial Photographers, please take notice!

"He has the soul of a true artist!" This expression by a noted American painter was applied to the masterpiece by Dwight A. Davis, which embellishes this issue, page 167. Another print of this beautiful subject, a veritable summer idyl, was hung at the last London Salon, of recent occurrence, where it excited much favorable comment. Like all Mr. Davis' work, this exquisite picture is pure, straight photography, and many art-lovers mistake it for a copy of an oil painting. Would our readers construe this as a compliment? No data.

Several years ago an amateur in Geneva sent the Editor a picture of a group of maidens, clad in classic costume, and engaged in rhythmic dance on the shores of Lake Leman. There was nothing to indicate the name of the photographer, who, possibly inspired by Botticelli's "Primavera," obtained suitable models and achieved a delightful picture symbolical of Spring. See page 169.

The strongly individualized head, page 172, represents an eminent Hindoo, Dr. Jagadis Chunder Bose, who has achieved considerable distinction as an inventor in connection with electricity, particularly wireless telegraphy. When he visited Cambridge, Mass., several years ago, he sat for his portrait to Mr. J. G. Thorp, an esteemed amateur photographer of that city. Like most of Mr. Thorp's work, this portrait is low in key, and quite impressive. No data.

The Editor feels that he owes no apology to PHOTO-ERA readers for having presented so frequently during the past five years, portraits from the Dührkoop studios. He knows that they have served the purpose of enjoyment, instruction and inspiration to thousands of serious workers. A similar influence will, no doubt, be exerted by the notably fine genre-study, page 175.

In "The Cobbler," page 178, we behold the man at his trade — no hired and costumed model. It represents a typical scene; and those who are disposed to criticize the monotony of the background — a thought which arose in the mind of the Editor — should remember that this is characteristic of such a place, although, in this instance, the background appears to be of artificial origin — a temporary screen, such as professionals frequently use, and the artist, the late W. B. Davidson, was a professional. He was endowed with true artistic temperament, which he manifested in all his work — home-portraiture, genre, landscapes and marines. He was a pastmaster in portrait-lighting, which is evidenced in his very successful picture of the cobbler. No data.

The "Rolling Main," page 179, is a sane and satisfying marine study. The artist, William Findlay, is an enthusiastic lover of nature and approaches his subjects *con amore*. His descriptions, which accompany his photographs of natural scenery, fairly bubble with affection. As his views of the sea are usually made on the east coast of Scotland, near Fraserborough, the present one is, doubtless, a scene in that locality. The composition is unpretentious, but pleasing in the play of light, and is also well balanced. No data.

Anent a recent inquiry about picturesque castles in Germany, the idyllic sketchlike presentation of "Burghausen," page 181, is very opportune. It is one of many similar pictorial gems from Herr Eyermann's well-filled portfolio. The way the pictorial effect has been managed — the gradual rising in key, from a somber, solid base to a brilliant climax — the architectural mass, is masterly and quite remarkable. The picturesque old town with its extensive feudal castle rises high above the river Salzach in southeastern Bavaria. Data: Bright sun, 3 P.M.; Zeiss Tessar, 4½-inch; focus; Invicta plate; 1/25 second with four times yellow filter; bromide enlargement.

Our Monthly Competition

THE competition, "Cats and Kittens," was very productive, as was expected. A more popular subject could scarcely have been selected; for among all house-

EXPOUNDING THE LAW HONORABLE MENTION — CATS AND KITTENS WM. N. WHITE

hold-pets, a kitten reigns supreme. The number and variety of cat-pictures are virtually unlimited, although relatively few possess genuine artistic merit. The jury devoted considerable time to the task of selecting the prize-winners; yet many pictures which received honorable mention barely missed getting into the prize-class. Some of these have been much improved by reduction, as may be noted in the group of prints, page 186. Although the data of all these pictures are interesting, we give details of only those which must have been difficult to produce.

"The Song of a Bird," Nick Bruehl. September, 9 to 10 A.M.; bright; Wollensak Velostigmat, series II; stop, F/8; 1/25 second; 3A Graflex; Speed Film; pyro; Azo print.

"A Little Music," Mrs. Durrant; 5 x 7 Poco; Cooke lens, series III; interior; bright sunshine outside; Stanley; bulb exposure; Kruxo print.

"The White Cat," T. W. Kilmer; 4 x 5 Graflex; Carl Zeiss 1C Tessar; 10-inch; outdoors; 1/10 second; Sigma plate; tank pyro-soda; contact Azo print.

The eyes of Mrs. Cassidy's handsome cat, page 188, have been rendered with remarkable fidelity. The halftone has held the illusion of the greenish tinge exceedingly well. Data: Indoors; sunlight without; January, 9.30 to 10.30 A.M.; Auto Graflex; 5 x 7 Seed L Ortho; B. & L. Tessar 1C, F/4.5; used wide open; 1/10 second; Special Portrait Velox print; Nepera solution.

"Fluffy," page 189, is certainly irresistible and an emblem of grace. The lone white spot is the tip of the tail. Data: Indoors; ordinary window-light; Turner-Reich lens, at full aperture; 1/4 second; Stanley; pyro; Velours Argo enlargement.

"Pretty Boy," beside her, is well named, and the portrait appears to do him justice. Data: Indoors; January 12; afternoon; near window; 1 second; R. R. lens; 6½ inch; stop, F/8; Yunit Ortho, 4 x 5; Pyro; Cross bromide enlargement.

"Kitty Gray" must have been a restless sitter, as diversion was necessary for a successful exposure. Data: Inside; light from two windows; B. & L. 6-inch Symmetrical; U. S. 3; pyro; Standard Polychrome; Platino bromide C.

"Smudge," below, has a saucy air, and his portrait is an admirable bit of open-air photography. Data: Sunshine; Seed 26; pyrocatechin; Goerz Dagor; stop, F/6.8; 1/75 second; Velvet Velox enlargement.

Originality of design and good composition, with artistic treatment, gave Mrs. Foster's print, page 191, the highest award. The picture is filled with suggestion and sympathetic appeal. Data: January. 10 A.M.; dull, snowing; 5 x 7 Premo camera; Goerz 8¼-inch lens; wide open; 1 second; Azo print.

A capital group is "Confidences," page 192. It is the work of an artist and bound to make many friends. Data: May, near noon; outdoors; sunlight diffused by white screen overhead; 7½-inch R. R.; stop, F/8; Wellington Anti-Screen plate; 1/15 second; 4 x 5 camera on tripod; 9 x 11 Normal Studio Cyko enlargement.

Mr. Morrison's effort, page 193, is a pleasing study in contrasts of much pictorial value, although the strong line of demarcation extending toward the right is a little unfortunate. Data: snapshot with small film camera; enlarged on Haloid Regal Bromide.

Of the large number of quasi-genre pictures submitted, Mr. White's contribution, page 195, pleased the jury the most. It is a clever bit of arrangement and a complete technical success. No data.

"Bad Manners," page 197, is one of the most original pictures in the entire contest. The print was faint, without contrast and poor in color, yet the halftone yielded a very gratifying result. Data: June; sunlight; N. C. Film; pyro, tank; Zeiss Tessar IIB; 6½-inch focus; stop, F/8; 1/25 second; 6½ x 11 standard bromide enlargement.

President Falk of the New York State Association did well to pose to Walter Barnett, of London, for his portrait. Page 200. It expresses the amiable character and sterling integrity of one of America's foremost photographers, and we are glad to be privileged to publish it.

XUM

THE CRUCIBLE

A MONTHLY DIGEST OF FACTS FOR PRACTICAL WORKERS

With Reviews of Foreign Progress and Investigation

Edited by WILFRED A. FRENCH, Ph. D.

Readers are encouraged to contribute their favorite methods for publication in this department
Address all such communications to The Crucible, PHOTO-ERA, 383 Boylston Street, Boston

Ultra-Violet Rays as Detective

CHANGES in documents, made after the use of a chemical ink-eraser, may be detected by photography with the aid of ultra-violet rays, according to Dr. Robert W. Wood of Johns Hopkins University, who announced his discovery recently. Dr. Wood exhibited a piece of paper on which the words "twenty-four hundred dollars" appeared. The words originally were "twenty-four dollars."

The change was made by an expert, who had erased the word "dollars" and the line after the twenty-four with a chemical ink-eraser and had written "hundred dollars" in a manner that made it impossible to discover any change in the line, even with the aid of a high-power magnifying-glass.

Dr. Wood placed the slip of paper under the ultra-violet rays and photographed it, giving it a ten-minute exposure. The result was that a heavy smudge appeared after the words "twenty-four," clearly showing that there had been an erasure and something else written in. The explanation is that, in removing part of what had been written, a stain was left, invisible to ordinary light, but shown clearly by means of ultra-violet rays.

To Produce Photographic Prints in Two Colors

THE *Photographische Welt* publishes the following formula for preparing a paper that will give prints in two tones or colors. Good drawing-paper is coated with a warm solution of gelatine and sensitized in a bath composed of:

Water	200 ccm.
Ferric citrate	2.5 grms.
Silver nitrate	1 grm.

Print in the sun until the image appears complete; this will require about the same time as Aristo paper; then wash the print, which should increase its intensity slightly, after which it is immersed in

Water	250 ccm.
Potassium ferricyanide	1 grm.
Sulphuric acid	3 ccm.

As soon as the sky and light middle tones take on a bluish tint, wash and fix for two minutes in a very weak hypo solution; then wash again for thirty minutes before drying.

A New Method of Sulphur-Toning

IN view of the drawbacks connected with the use of hot hypo and alum solutions and the ordinary bleaching methods of toning bromide and gaslight prints, the Lumière Brothers have worked out a new formula in which they employ the sulphur toner in a colloid form; that is, in combination with albumen, fish-glue, dextrine, gum-arabic, etc. The colloid is mixed with a solution of sodium sulphite and to this hydrochloric acid is added; this decomposes the sulphite, setting free the sulphur it contains, which at the moment of liberation attaches itself to the reduced silver of the print and produces the brown tone. The sulphur is not precipitated, but remains suspended in the liquid in the form of an extremely fine emulsion, providing the manipulations have been correctly carried out. The formula that the Lumières have found to work best is:

Sodium sulphite	125 grms.
Dextrine (50% solution)	250 ccm.
Water	1000 ccm.

Just before using, add to above 50 ccm. of hydrochloric acid. The mixture, which at first is of a clear yellow color, gradually becomes milky; but this is of no consequence, as even after standing several hours the sulphur is not precipitated. The prints are immersed in the solution for twenty or twenty-five minutes, but no change in tone takes place until after they have been washed in water for some time. After remaining an hour and a half in the water a fine warm brown tone is obtained, without any trace of discoloration in the whites. The tone is very similar to that obtained by the hot hypo and alum method. The surprising thing about this method is that the toning does not take place till after the prints have been washed.

To Prepare Fine-grained Plates

DR. A. MIETHE, in collaboration with Dr. E. Lehmann, has revived an old collodion process, adapting to it modern methods and improvements, describing the whole process quite fully in a recent number of *Das Atelier des Photographen*.

For many photographic purposes the grain of the present-day dryplate is much too coarse, and for that reason is unusable for such purposes. With all the advantages and conveniences of highly sensitive dryplates, firms that do a copying-business employ in their work to a large extent collodion-baths and emulsion-plates. For very fine reductions, such as microscopic writing, "Stanhope" pictures and reductions to a very small scale, the dry gelatine plate is absolutely impossible. As the formulæ for making very fine grained plates have been in the course of time almost entirely lost, only a few remaining in the hands of certain individuals, the revival of such a process and adapting it to present-day requirements is a great service to photographers.

The following is a very condensed description of the work of Drs. Miethe and Lehmann:

The perfectly cleaned plates are first covered with an under-coating of alumed gelatine and then flowed with an iodized collodion containing cadmium and ammonium iodides. They are then silvered in a bath of potassium

BAD MANNERS H. J. SCHULZ
HONORABLE MENTION — CATS AND KITTENS

iodide and nitrate of silver until the liquid flows from the surface smoothly; then washed several times in distilled water and coated with albumen containing potassium iodide and bromide. They are now completely dried, and in this state can be preserved for future use, or at once given the second silvering, which renders them highly sensitive to the light. The second silver bath is somewhat different in composition from the first, and the plates are left in it from one to two minutes, after which they are again washed in distilled water, dried, and are ready for use.

In order to obtain extreme sharpness of definition with these plates, a special camera and lens is required. A photo-microscopic lens is recommended, or a specially constructed lens of not more than thirty or forty millimeters focal length. Where the greatest possible sharpness is required, the plate should be developed physically, a metol-mercury developer being most suitable. If exposure has been correct, the first traces of the image will appear in about one minute; but if it has been short, this may take from two to two and a half minutes without risk of injuring the negative, and the full development will take from five to eight minutes. The image, which at first appears extremely thin, is fixed in a three-percent solution of potassium cyanide and copiously washed with water. Strengthening follows immediately with a metol silver nitrate bath, after which the plates are again washed and dried.

With these plates reductions can be made as small as 100 to 1, which under a microscope will be found to be perfectly sharp and clearly legible, and will bear enlarging up to 150 times; only at about 200 times' magnification does the grain become perceptible, while to make it clearly visible would require an enlargement of 1,000 times.

The Christiansen Color-Filter

THIS, the latest production in the color-filter line, is a German patent which has been placed on the market by the Agfa Company. We condense the following description of the new screen from *Photographische Industrie:*

Christiansen makes a concentrated solution of shellac in alcohol; this he divides into three parts, which are respectively colored blue, red and green. The three solutions are then emulsionized with spirits of turpentine, in which the shellac forms very small colored globules which settle at the bottom when the liquid is allowed to stand, the smaller globules being precipitated first. This peculiarity makes it possible to obtain globules of comparatively uniform size. The three colored emulsions are then mixed and spread on a transparent support, such as glass or celluloid; this is first coated with a thin varnish of shellac to which the globules adhere without laying one over the other. Both the shellac and the turpentine may be substituted by other substances, such as benzol, toluol, benzine, etc., for the turpentine; but it is essential that the substance used for the colored emulsions should be entirely insoluble or at least dissolve with difficulty in the fluid used for flowing it on the support. To the turpentine solution gum damar is added, which covers the globules with a thin protecting coat that prevents them from coalescing.

The Christiansen process is the most interesting of the many that have been introduced since the Autochrome plates were placed on the market, but its practical production is still surrounded with difficulties. The filter closely resembles the Autochrome in its irregular grain, which is somewhat larger than that of the Lumière filter, but the elements are said to lie close together without any intervening spaces.

Making a Daguerreotype

THE *modus operandi* of the daguerreotype, although well known through frequent description, is repeated here to be read in connection with Mr. Thomson's article in this issue; also, with a practical demonstration of the process before the New York state convention, described under that caption. On the silvered copper-plate the iodine fumes combined with the silver to form silver iodide, $Ag_2 I_2$. Light breaks down this rather unstable compound to the subiodide AgI as the plate is exposed in the *camera obscura* for a length of time. The latent image on the silver plate is developed by exposure to the fumes of heated mercury. The mercury attacks more readily the light-affected subiodide, freeing the iodine and combining with the silver to form a white silver amalgam on the darker background of unaffected silver iodide. Both iodides are then removed in a fixing-bath and the plate gold-toned to clear up the lights and give a wonderful golden gray to the darks.

It is seen that this gives a positive at each exposure. Where the highlights are, there the silver iodide is broken down to react with the hot mercury fumes to form the white silver amalgam. The unaffected silver plate then is made to correspond to the darks by the gold toning.

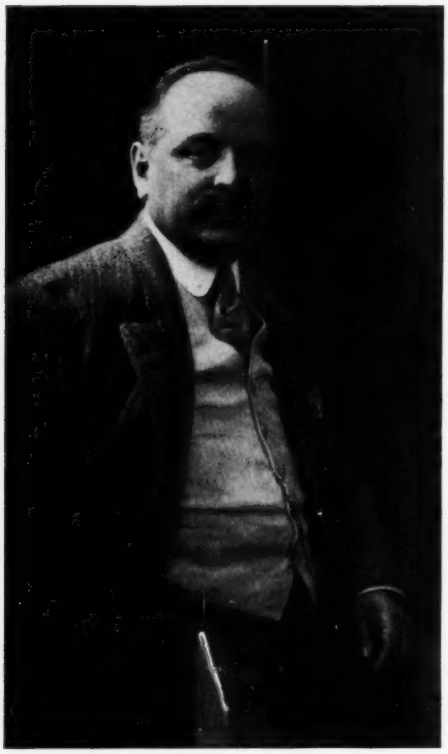
XUM

NOTES AND NEWS

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication

New York State Convention

New York City, February 12-14



PRESIDENT B. J. FALK WALTER BARNETT

THE Ninth Annual Convention of the Professional Photographers Society of New York was held in the spacious and well-lighted banquet hall of the Metropolitan Life Insurance Building, New York City, February 12, 13 and 14. Thanks to the energetic activity of two men, President B. J. Falk and Pirie MacDonald — men of iron and blood — it was a pronounced success. It was arranged as primarily a high-class picture-show, and proved what the name implies. There was no definite program; indeed, none was printed. There were no lectures and, above all, no verbal exploits like the one which was perpetrated at last year's convention and which caused much unfavorable comment.

NEXT CONVENTION AT BUFFALO

The first day but little business was transacted. It consisted of choosing the next place of meeting, which proved to be Buffalo; and of appointing a committee to nominate officers for the ensuing year. This left most of the day for members to enjoy the picture exhibits.

FRANK BANGS AND CHAS. HALLAN

The second day was full of interest. At 10 A.M. President Falk called the meeting to order, about 175 members being present, and announced a number of demonstrations which were conducted by experts. The first was a vertical enlarging-apparatus — improvised and set up on the platform for the occasion — the joint idea of Frank C. Bangs and Secretary Hallan. The object of the arrangement was to produce enlargements in the quickest possible time, which was accomplished perfectly in a few minutes. An arc-light and a double 10-inch condensor were part of the equipment, from which an 8 x 10 print from a 5 x 7 negative was produced. Mr. Bangs explained the method in detail, how he used it in his business, and why a 5 x 7 negative yields truer and better enlargements, in any size. He stated that he had made 22 x 24 prints in this manner which were as good as contact prints of the same size.

E. B. CORE

E. B. Core, the popular veteran portraitist, followed, describing his method of uniting in one print the best parts of two separate, unsatisfactory negatives of the same subject. He displayed two 5 x 7 negatives of a mother and child, the latter having moved in one of them. By masking and superimposing he had made a combination print or transparency, retouched the latter and produced from it a new and satisfactory negative. He also attained his object by means of an enlarged negative, and using a slow, non-halation plate.

H. M. HOLLINGER

H. M. Hollinger was then invited to disclose the secret of his method of copying daguerreotypes. He illuminates the original by means of direct sunlight reflected by a mirror and then passed through a piece of colored glass, orange or any other suitable color, gives a short exposure, then a long one *without* the sunlight. The lens in the meantime is protected against reflections by a black cloth provided with an aperture. His printing-medium is heavy, rough platinum paper, with a little dodging here and there. Asked how much he charged for such a copy, Mr. Hollinger replied, "From $10 to $150 according to the amount of work.

EUGENE R. HUTCHINSON

During his interesting exposition, the veteran referred to Eugene R. Hutchinson, the young and brilliant photographer of Chicago, who, being present, was asked to stand up. He complied and was greeted with applause. He was afterwards invited by the chair to address the audience. With becoming modesty he related the story of his short and uneventful career; his first love of the art, and his individual way of interpretation. He was influenced by color rather than by line,

and preferred to work along unconventional lines. He purposely stayed away from conventions so as to remain uninfluenced by what others were doing. Referring to his prints exhibited in the hall, Mr. Hutchinson said that, while they might be considered freakish, all were made with conscientious thought.

RYLAND W. PHILLIPS

The next speaker was Ryland W. Phillips, who declared that the print-exhibition in the hall was one of the finest New York had ever seen. He urged the craft to suit the work to the needs of the sitters, and not to force upon them innovations which are beyond them to understand. He considered it the photographer's duty to study this question and to proceed carefully in raising the artistic standard of his work.

CRITICIZING THE EXHIBITS

The third day opened with an informal inspection of the print-exhibits, which again elicited hearty expressions of approval, and, particularly, intelligent criticism from the members present. It was good to hear frank opinions in cases where the work was faulty, and in spite of occasional condemnation of conventional inconsistencies noticeable in pictures even by prominent practitioners, the utmost good feeling prevailed. The man from the smaller town as well as the leader in a big city came to learn, and there was none among the "top-notchers" present who professed to know it all. It gladdened the ear of the Editor to hear how Goldensky or Garo drew particular attention to the modest exhibit of a comparatively new worker, pointing out to the group of listeners certain good points in lighting, pose, expression or treatment, and prophesying for the young artist official recognition in the very near future.

ELECTION OF OFFICERS

At 11 A.M. the business of the day was soon transacted. The election of officers, by acclamation, resulted as follows: president, Howard D. Beach, of Buffalo, to whom President Falk offered his own support and that of the New York City photographers; vice-president, Frederick Robinson, of Ithaca; secretary, R. R. MacGregor, of Buffalo; treasurer, re-elected, F. E. Abbott, of Little Falls.

A WELL-FILLED TREASURY

Of special interest among the speeches of acceptance by the new officers was the statement by Treasurer Abbott that there would be a very substantial sum in the treasury after all bills should have been paid. It was voted that the president be instructed to issue to each member of the State Association in good standing, who had paid his dues for five consecutive years, a certificate signed by President Beach and Secretary MacGregor.

PROPRIETOR-PHOTOGRAPHERS

It was also voted to amend the constitution, Article III, to read that out-of-state members, who are owners of studio establishments, must also be professional photographers. On motion of Pirie MacDonald it was voted to give the thanks of the Society to Juan C. Abel, of *Abel's Weekly*, for his enthusiastic and disinterested labors in behalf of this convention. A rising vote of thanks, including a written acknowledgment to that effect from the secretary, was extended to members outside the State who had contributed print-exhibits.

MAKING A DAGUERREOTYPE

Next, Mr. Elliot and Mr. Hargrave were introduced for the purpose of showing how a daguerreotype is actually made. The process — now so familiar as to need no description, although set forth on page 197 of this issue — was thoroughly explained by Mr. Hargrave, an old-time daguerreotyper. Pirie MacDonald, consenting to serve as model, then placed himself in the full sunlight before the camera. The exposure was about two minutes. After development, the white silver image was brought forth for general inspection and declared a success.

THE EXHIBITS

The display of pictures — already declared to be the best of any New York state convention — had the advantage of good illumination, tall windows admitting the light directly from the sky. Most of the exhibits, including those from outside the state, were framed. Displayed conspicuously at one side of the main exit was a series of prints by Eugene R. Hutchinson, which, by their novelty of arrangement, lighting and treatment, created considerable interest. In his remarks before the convention, Mr. Hutchinson explained his views on photographic portraiture. On the other side of the door was a telling exhibit of eleven framed gum prints by Garo, of Boston. The mystery, suggestion and beauty of these portraits was the talk of the convention.

In the vote as to which section had made the best exhibit as a whole among the Section-Exhibits, the prize was awarded to the Buffalo Section. The Metropolitan Section was not in competition.

The complimentary exhibits are listed as follows:

Arnold, B. J., Del Monte, Calif.
Bachrach, Louis, Worcester, Mass.
Baker Art Gallery, Columbus, Ohio.
Benjamin Studio, Cincinnati.
Bill, Frank, Cleveland, Ohio.
Bishop, Allyn A., Newport, Vt.
Bowersox Studio, Cleveland.
Cairns, Wm., Newark, N. J.
Clark, Frank Scott, Detroit, Mich.
Dooner, R. T., Philadelphia.
Dozer, L. A., Bucyrus, Ohio.
Edmondson, Geo. M., Cleveland.
Elliot, J. Mitchell, Philadelphia.
Ellis, William Shewell, Philadelphia.
Feldman, Fred, El Paso, Texas.
Fryett, F. C., Grand Rapids, Mich.
Garo, J. H., Boston, Mass.
Georg, Victor, Springfield, Ill.
Goldensky, Elias, Philadelphia.
Gray Studio, Germantown, Pa.
Harris & Ewing, Washington, D. C.
Hayes, Clarence M., Detroit, Mich.
Heath, R. A., Pontiac, Ill.
Hovey, Clarissa, Boston, Mass.
Hutchinson, Eugene R., Chicago.
Janvier, Baltimore, Md.
Johnston, R. W., Pittsburgh, Pa.
Kajiwara. T., St. Louis.
Kelmer, J. Will, Pittsburgh, Pa.
Knaffl Brothers, Knoxville, Tenn.
Kœhne, W. L., Chicago.
Kubey, L., Philadelphia.
Lerski Studio, Milwaukee, Wis.
Lewis, C. L., Toledo, Ohio.
Moore, Frank, Cleveland, Ohio.
Nœtzel Studio, Newton Center, Mass.
Norton, Clifford A., Cleveland, Ohio.

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Phillips Studio, Philadelphia.
Pierce, H. H., Boston, Mass.
Schrader, Jos., Little Rock, Ark.
Schreiber Studio, Dallas, Texas.
Sommers, F. M., Cincinnati, Ohio.
Stein, S. L., Milwaukee, Wis.
Sweet Brothers, Minneapolis, Minn.
Strauss, J. C., St. Louis, Mo.
Strauss-Peyton, Kansas City, Mo.
Towles, W. H., Washington, D. C.
Venard, Lincoln, Ill.
Voiland, H. E., Sioux City, Iowa.
Walden, W. Neal, Evansville, Ind.
Williams, R. M., Evansville, Ind.
Zweifel Studio, Dayton, Ohio.

NEW YORK EXHIBITORS

Aitken, J. T., Port Jervis, N. Y.
Albany Art Union, Albany, N. Y.
Bangs, Frank, New York City.
Beach, Howard D., Buffalo, N. Y.
Boyce, Burt, Troy, N. Y.
Bradley, A. F., New York City.
Buxbaum, I., Brooklyn, N. Y.
Byron, Joseph, New York City.
Camp Art Co., Jamestown, N. Y.
Core, E. B., New York City.
Conklin, Philip, Troy, N. Y.
Disinger & Adams, Binghamton, N. Y.
Ernsberger & Sons, Auburn, N. Y.
Falk, B. J., New York City.
Frey, Carl K., Utica, N. Y.
Gardner Studio, Brooklyn, N. Y.
Goodman Studio, Brooklyn, N. Y.
Haas Studio, New York City.
Hale, J. E., Geneva, N. Y.
Hallan, Chas., New York City.
Hicks, Carrie B., Brooklyn, N. Y.
Hoyt, Dudley, New York City.
Hyatt, Edwin, Cortland, N. Y.
Johnston, Frances B., New York City.
Kalt, A. C., Brooklyn, N. Y.
Lifshey, Sam, Brooklyn, N. Y.
Lindsley, H. R., Auburn, N. Y.
Lloyd, Al., Troy, N. Y.
Lorey, Gustav, Albany, N. Y.
MacDonald, Pirie, New York City.
McFarlin, A., Elmira, N. Y.
Marceau, Theodore, New York City.
Mix, E. L., New York City.
Morton, Geo. P., Trumansburg, N. Y.
Rabineau Studio, Schenectady, N. Y.
Robinson, Fred, Ithaca, N. Y.
Rosch Studio, New York City.
Schloss, Jacob, New York City.
Schwarz, Ira D., Brooklyn, N. Y.
Selby, Misses, New York City.
Sipprell Studio, Buffalo, N. Y.
Sutton, M. S., New Rochelle, N. Y.
Talbot, Walter, Schenectady, N. Y.
Van Sicklen, E. F., Islip, L. I., N. Y.
Underhill, Irving, New York City.
Whitney, Burt A., Little Valley, N. Y.
Wurts Brothers, New York City.

THE AUTOCHROME EXHIBIT

As the N. Y. State Society does nothing by halves, the arrangements for displaying autochromes was as good as last year, although the number of exhibits was smaller than that memorable show arranged by Mr. Falk. The general artistic quality of this year's collection was never higher. A plate, by Frank Scott Clark, was conceded to be the finest in the entire collection. It was an indoor portrait of a lady in a white gown ornamented with pearl passementerie, the delicate tints of which were exquisitely rendered. The other exhibits were by the following:

Burnham, John A., Boston, Mass.
Buxbaum, I., Brooklyn, N. Y.
Falk, B. J., New York City.
Glaister, A. H., Orange, N. J.
Hovey, Clarissa, Boston, Mass.
Johnston, Frances, New York City.
Lewis, Alfred Homes, New York City.
Lorey, Gustav, Albany, N. Y.
Marceau, Theodore, New York City.
Rau, William H., Philadelphia.
Simon, Dr. W., Catonsville, Md.
Sipprell Studio, Buffalo, N. Y.
Strauss, J. C., St. Louis, Mo.
Underhill, Irving, New York City.
Van Sicklen, Islip, L. I., N. Y.

COMPARATIVE EXHIBITS

A particularly interesting feature of the print-exhibition was seven series of thirty-six prints each, and each series printed from a separate negative on thirty-six different development and printing-out papers, by a prominent craftsman, viz., B. J. Falk, Dudley Hoyt, E. B. Core, Pirie MacDonald, Theo. Marceau, Frank Bangs and A. F. Bradley. A technically excellent negative was used for each series (thirty-six prints), the uniformly fine quality of which was the cause of much astonishment, when a marked difference might reasonably have been anticipated. One of the exhibitors confided to the Editor that the seven negatives were sent in one case to each paper-manufacturer, in turn, which explains, in a measure, the remarkable uniformity of clearness and gradation.

THE BOHEMIAN DINNER

The third and last day of the convention was brought to a close by a "Beefsteak-Dinner" in the evening at Healey's. Even at three dollars a plate, a large company took part and enjoyed itself hugely. There was much hilarity, the utmost good feeling and no unseemly conduct. Limericks with early portraits setting forth in humorous vein the virtues of popular photographers — MacDonald, Hoyt, Goldensky, Marceau and others — were posted conspicuously about the dinner-room. Vaudeville entertainers with merry songs and graceful dances enlivened the gastronomic feast, and the many ladies who were present will vouch for the *comme il faut* character of the entire bohemian evening. Present, and fully appreciating the innocent fun, were B. J. Falk, Mr. and Mrs. Dudley Hoyt, E. B. Core, Mr. and Mrs. MacDonald, Mr. and Mrs. Marceau, J. H. Garo, Morris Burke Parkinson, William H. Rau, Geo. W. Harris, Mr. and Mrs. Goldensky, Chas. L. Lewis, Fred Feldman, Mr. and Mrs. Howard D. Beach, Mr. and Mrs. Gustav Lorey, Mr. and Mrs. Byron, Mr. and Mrs. A. F. Bradley, S. H. Lifshey, Frank Bangs, H. A. Strohmeyer, Harry Fell, Joseph Di Nunzio, H. A. Stone and J. Frank Hearn, also members of the photographic press, John Tennant, Frank V. Chambers, Carl Ackerman, Juan C. Abel and Wilfred A. French — 137 in all.

B. J. FALK IN ENDURING BRONZE

The special feature of the evening, however, was the presentation to the genial president of the State Association, Benj. J. Falk, of a life-size bronze bust of him-

self, cast from the clay model which was made with sensational rapidity before last year's convention, by a New York sculptor. Mr. MacDonald unveiled the bronze and made the presentation speech. The entire proceeding was a complete surprise to Mr. Falk, and produced a scene of tumultuous enthusiasm. There was no mistaking the popularity of Mr. Falk, as a man and as an artist, as well as the value of the service he has rendered photography in New York City and throughout the state.

Annual Concert and Ball of the P. P. Club of New York

THE Professional Photographers' Club of New York held its sixth annual concert, followed by a ball, at Hotel Majestic, New York City, February 12, 1913. The executive board is to be complimented for the splendid success of the undertaking. A program of choice musical selections was rendered by the orchestra of the Hoadley Musical Society, George F. Briegel, conductor, which is composed entirely of amateurs from all walks of life, including several photographers and photo-supply dealers. The superb quality of the performance is vouched for by the music-critics of the New York press. S. H. Lifshey, the eminent photographer, a member of the orchestra, was particularly enthusiastic.

The ball was also a highly creditable event. The dancing lasted from 9 P.M. to 4 A.M. and five hundred persons participated. The official program of PHOTO-ERA format was also a praiseworthy achievement, paper, cover, printing and cuts — all high-class. The numerous illustrations were halftones of representative work of Greater New York's foremost photographers. We are sure that those who are interested can obtain a copy, if any are left, by addressing S. H. Lifshey, who is on the Editing Committee.

Our Hand-Colored Photographs Contest

GREAT interest is manifested in the PHOTO-ERA contest of hand-colored photographs described on the Guild contest page, and many Guilders are asking for information regarding choice of colors. Although this rests entirely with the contestants, the Editor has pointed out the desirability of certain standard colors. For instance, concerning the Assur Colors, which are very popular in Europe, and whose unusual merits have arrested the attention of professional and amateur workers in this country, we have been asked to give an opinion. This was expressed in our March issue, and also by our Berlin correspondent; but here are some interesting data:

Delighted with Assur Colors, a subscriber sends us a photograph of a Bantam rooster in the full beauty of his brilliant plumage, done in these colors and, as he adds, with astonishing ease in a very short time. Another writes in praise of the Assur method, of their wide range of possibilities, brilliancy and strength.

Mr. Max Vœtter, of Brooklyn, N. Y., informs us that his experience with these colors on landscape-photographs has been so gratifying that he intends shortly to open an Assur Studio, at 224 Lefferts Avenue, where he will be prepared to explain, free of charge, the use of Assur Colors in portraiture and how to obtain oil-color effects.

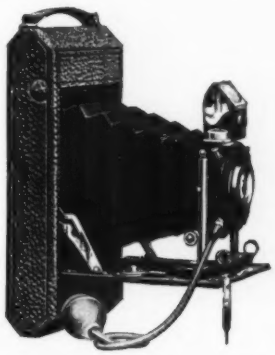
Cincinnati's Awakening

FRIENDS inform us that matters photographic in Cincinnati, Ohio, have taken an animated turn. They report that the Y. M. C. A. arranged and managed with considerable credit a competitive photographic exhibition, in which two workers, Alice F. Foster and Claude D. Millar — whose pictures have been frequently published in PHOTO-ERA — captured five and two prizes respectively. There were five classes, and three prizes in each; while thirty-five amateurs entered five hundred prints. The artistic standard of the exhibits is declared by connoisseurs to have been quite high. The exhibition was very well attended.

The success of this undertaking has stimulated the amateurs of Cincinnati to form a camera club, the success of which seems assured. There is, at present, much enthusiasm among these amateur workers and, under energetic and intelligent leadership, a camera club should prosper.

The 1913 Seneca Camera Catalog

THE Seneca catalog for 1913, just received, is a well-arranged and finely-executed book and sets forth the recognized merits of the Seneca line. While their cameras have been improved to ensure maximum ease of operation and the attainment of mechanically perfect negatives, the most noteworthy advance has been made in the popular Seneca Roll-Film Cameras. The Senco Cameras, adapted to roll-films of all standard makes, were introduced a year ago, and were cordially received by the public. They are now made in every standard size and leave nothing to be desired with respect to lightness, operation and appearance, as is suggested by the accompanying cut.



The Senco is made entirely of aluminum, is in "one piece" and self-contained. There are no exposed hinges and the camera is absolutely light-tight. The claim that the Senco is easier to load and faster to operate is generally recognized as just.

The Illinois College of Photography

THE College received recently a call for a photographer to accompany the Crocker Arctic Expedition on a two years' exploration trip to the unknown portions of the arctic seas.

One of the members of the March class, Mr. Chas. H. Storm, has just returned from a seven years' sojourn in the Philippines and will return to that country after finishing the course in commercial photography.

Mr. Alfred Lomen of Nome, Alaska, went to Peoria, Ill., last week to meet Captain Amundsen, discoverer of the South Pole and the Northwest Passage. Mr. Lomen was well acquainted with Captain Amundsen in Alaska.

A new and complete enlarging-equipment has been installed in the Enlarging-Department.

XUM

The Ensign Folding Reflex

THE photographers' special attention is called to the new line of Ensign Cameras lately put on the market. It contains a full selection of apparatus from the small inexpensive Box Camera to the Reflecting Cameras of high efficiency. The Ensign Folding Reflex is the height of the camera-maker's art for compactness and finish. It is a most desirable camera for the traveler, where space is limited, and enables him to obtain the better results possible with the reflecting type of camera, which has no greater volume than an ordinary folding camera. Apply to G. Gennert, 24–26 East 13th St., New York, or 320 So. Wabash Ave., Chicago, for a complete catalog of Ensign Cameras, which will be sent promptly.

New Folding Pocket-Camera

BURKE & JAMES, of Chicago, have just placed upon the market a most attractive type of a pocket-camera — the No. 0 Folding Ingento. It is adapted to roll-film and makes pictures 2¼ x 3¼ inches. It is made entirely of metal, covered with fine-grained leather, bed and back of aluminum. The front is extended automatically and, by drawing down the bed, the camera is ready for instant use.

NO. 0 FOLDING INGENTO

The present model has a high-grade fixed-focus lens, U. S. 8. Later models, we understand, are to be fitted with R. R. and anastigmat lenses having an ingenious focusing-device. The shutter is automatic with the T. B. and I. adjustments. The finder is very brilliant, and reversible for taking pictures both ways. It measures 1¼ x 3 x 6¼ inches and slips easily into the hip-pocket. Resultant negatives yield perfect enlargements from four to eight times their size. Though light, the camera has sufficient weight so that it can be held securely during exposure, and not produce blurred pictures. This is a great point in its favor.

The foregoing is a frank, unbiased opinion, and is corroborated by prominent experts. The advertisement, printed in this issue, is true in every detail, and will repay careful reading.

French Color-Photography Competition

THE Société Française de Photographie closes its fourth competition in color-photography April 15, 1913. All classes of subjects are admitted in autochromes, dioptichromes, omnicolors and the like. The competition is open to all photographers, professional and amateur, and is divided into five classes: reproductions smaller than 9 x 12 cm. to be viewed by daylight in diascopes; reproductions for projection of a size up to 9 x 12 cm. inclusive; stereoscopic views of all sorts; scientific subjects; and reproductions by photographic processes, in black or in colors, of pictures taken upon polychrome screen plates, the originals to accompany the reproductions in all cases. For all but the first and last, ten to twenty, inclusive, reproductions may be submitted; for the first and last, three to twelve inclusive. Medals in enamel, silver and bronze will be placed at the disposition of the jury for awards. A special medal will be reserved for work done in the studios of the society. The address of the secretary of the society is 51, Rue de Clichy, Paris, France.

Request for Goerz Photographs

THE C. P. Goerz American Optical Company of 317 East 34th Street, New York, is always glad to inspect photographs of unusual interest taken with their well-known Goerz Anastigmats. The range of subjects which they can use is wide, including high-speed photographs, genre and child-studies, home-portraits, and landscapes — if particularly attractive. Full data as to stop, exposure, etc., together with the number of the lens with which the negatives were made, should accompany each picture, and the price should be given first for the negative; with exclusive advertising-rights; second for a glossy print and publication-rights. In the case of portraits, etc., written permission to publish must also be obtained from the subject.

The Last Word in Projecting-Lanterns

EXAMINING, as we always do, the first copy of PHOTO-ERA that comes from the bindery, we read with peculiar interest, in the March number, the three advertising-pages devoted to the Kodiopticon and Velox Lantern-Slide Film. The following day we called upon a local dealer and asked to be shown this new optical lantern, so seductively described and illustrated in March PHOTO-ERA. The proprietor consented cheerfully and arranged to demonstrate to us its capabilities, then and there. We were prepared for a surprise and were treated to one.

The Eastman Company certainly deserves to be complimented — nay, thanked, for placing at the disposal of the amateur so light and compact, perfectly constructed and highly efficient a machine for projecting lantern-slides in the home. This really handsome machine has several novel features, including a water-cell for cooling the rays, and a lamp-house which will accommodate either an electric filament or a hand-feed arc-light — without rearrangement.

The lantern-slides, easily made by the amateur, are not on glass, but on Velox Lantern-Slide Film, although slides of standard sizes may also be used. Those shown us were clean, crisp. It was certainly a novel and delightful experience for us.

When the Editor wrote his paper on lantern-slide projection (see PHOTO-ERA for February, 1913), he had familiarized himself with every form and type of optical lantern that was known, never realizing that the Eastman Company was abiding its time, "lying low," and perfecting a machine of its own and one which is a positive novelty, as well as a simple and alluring piece of mechanism at a very moderate price. It will pay every reader of this little story to read or reread those three pages in March PHOTO-ERA, or he may send to the Eastman Kodak Company for a Kodiopticon folder.

XUM

The New England Photographers

At the meeting of the executive board of the Photographers' Association of New England, held in Springfield, Mass., February 11, it was voted to hold the next annual convention in Mechanics Hall, Boston, September 2, 3 and 4.

Further particulars, including the name of the successor to President F. A. Frizell, who retires for reasons of continued physical indisposition, will soon be made public.

New Editor for Wilson's Magazine

With the March number of *Wilson's Photographic Magazine*, Mr. Thomas Coke Watkins becomes chief editor of this venerable journal, while Mrs. E. L. Wilson, the widow of its founder, becomes associate-editor. Mr. T. Dixon Tennant retires from the magazine altogether. With this infusion of new blood, *Wilson's* should show improvement in its pages with consequent increase in popularity and influence. The new editors have our best wishes.

An Agfa Dividend for Everybody

The "Agfa" folks have a new surprise for the photographic trade. It's the "Agfa" DIVIDEND TO THEIR CUSTOMERS.

Better send in your request for one, if you use "Agfa" products; and if you don't —— but you will! Address Berlin Aniline Works, 213 Water Street, New York, N. Y.

The Editor Wins a Wager

Our readers may remember that about a year ago a correspondent criticized the Editor for insisting on misspelling the names of Frans Hals and Frits von Holm by "substituting an 's' for a 'z'" in the given names. It was then explained to him that, whereas Frans Hals was a native Dutchman, he was baptized "Frans," and that the cognomen "Franz" was purely German, although it is often used in this form in English-speaking countries. Similarly, "Frits" is a Scandinavian given name, and spelled alike in Dutch, Swedish, Norwegian and Finnish. Like "Franz," "Fritz" is exclusively a German baptismal name.

As the correspondent was skeptical, a wager was proposed by the Editor and accepted. It was lost by the correspondent, who gracefully paid the forfeit in the form of a first-class plaster-cast of the statue, "David Sheathing His Sword," by the French sculptor, A. Mercié, the original of which is in the Luxembourg Museum, Paris. An excellent illustration of the statue appears in connection with an article on plaster-casts, by W. W. Klenke, printed in this issue.

Card-Index for Home-Use

The importance of a filing-system in the form of a compact card-index for amateur photographers was explained, editorially, in the March issue of Photo-Era.

Such a desideratum has been placed upon the market by the Macey-Stetson-Morris Co., 49 Franklin Street, Boston, U. S. A. It is convenient, strong and compact, the dimensions being 3 x 3¾ x 5⅜ inches; weight, twenty ounces; price, 55 cents. The average cost of sending it safely packed, by parcel post, to any part of the United States, is 15 cents. This attractive and useful little card-index box is also useful for other purposes in the household, or for limited purposes in the office. We heartily recommend its use by all who wish to systematize their work. The cost is trivial compared with the utility and attractiveness of the article.

Up-to-Date Knowledge

The publisher is pleased to give up considerable space in this issue to a detailed account of photographers' doings at the ninth convention of the Professional Photographers' Society of New York, which occurred last February. We are sure that every reader, whether amateur or professional, will find it worth while to read this account by the Editor, for it describes several modern processes and apparatus used by progressive professionals, also a remarkable print-exhibit.

Photo-Era Prize-Cup

In deference to the wishes of prize-winners who, for one reason or another, are unable to use $10.00 worth of supplies in a short time, the publisher will give winners of the first prize the choice of photographic supplies to the full amount of the prize, or a solid silver cup of artistic and original design, as shown in the accompanying illustration. Therefore, winners of the first prize in the Round Robin Guild monthly competitions will please state their preference after they shall have been notified of their award.

The World's Masterpieces in Painting

There are many copying concerns, not to be dignified by the name, "publishing firms," who do a profitable business by making and selling inferior photographic prints of famous paintings. Those of the buying public who cannot discriminate, or who have never seen the original pictures, are thus grossly deceived.

But the new and sumptuously illustrated catalog of Adolph Braun & Co., the eminent art-publishers of Dornach, Alsace, is an absolutely trustworthy guide to the picture-galleries of the world. It contains about fourteen hundred excellent halftone cuts of selected pictures by old and modern masters. These illustrations, which average 2 x 3½ inches, serve as a key to large prints published by the above-named house, being also useful to art-students and picture-lovers. This highly desirable catalog will be sent postpaid for $1.00 from the publishers' New York office, 13 West 46th Street.

Buying Second-Hand Outfits

Although Photo-Era has published, for some time past, frank statements regarding the merits of buying second-hand cameras, lenses and other apparatus, it invites the attention of its readers to the very clear and comprehensive article on this subject by Virginia F. Clutton, the well-known photographic writer. Her article is so explicit that its length will require it to be printed in two parts, the first of which will be found in this issue. Every amateur who contemplates the purchase of second-hand materials, no matter how conscientious and well-meaning may be the dealer or owner, should read Mrs. Clutton's plain statement, together with suggestions how the weakness of a camera or any of its parts may be detected.

XUM

Exposure-Guide for April

Calculated to give Full Shadow-detail, at Sea-level, 42° N. Lat.

For altitudes up to 5000 feet no change need be made. From 5000 to 8000 feet take ¾ of time in table. From 8000 to 12000 feet use ½ of exposure in table.

Exposure for average landscapes with light foreground, river-scenes, light-colored buildings, monuments, snow-scenes with trees in foreground. For use with Class 1 plates, stop F/8 or U. S. 4. For other plates, or stops, see tables.

Hour	Bright Sun	Sun Shining Through Light Clouds	Diffused Light	Dull	Very Dull
11 A.M. to 1 P.M.	1/50	1/25	1/12	1/5	1/3
9-11 A.M. and 1-3 P.M.	1/40	1/20	1/10	1/5	1/2
8-9 A.M. and 3-4 P.M.	1/30	1/15	1/8	1/3	2/3
7-8 A.M. and 4-5 P.M.	1/20	1/10	1/5	1/2	3/4
6-7 A.M. and 5-7 P.M.	1/15	1/8	1/2	3/4	1

The exposures given are approximately correct, provided the shutter-speeds are accurately marked. In case the results are not just what you want, use the tables merely as a basis and increase or decrease the exposure to fit the conditions under which one works. Whenever possible keep the shutter-speed uniform and vary the amount of light when necessary by changing the stop.

* These figures must be increased up to five times if light is inclined to be yellow or red. Latitude 60° N. × 1¼; 55° × 1; 52° × 1; 30° × ½.

For other stops multiply by the number in third column

F/4	U. S. 1	× 1/4
F/5.6	U. S. 2	× 1/2
F/6.3	U. S. 2.4	× 5/8
F/7	U. S. 3	× 3/4
F/11	U. S. 8	× 2
F/16	U. S. 16	× 4
F/22	U. S. 32	× 8
F/32	U. S. 64	× 16

SUBJECTS. For other subjects, multiply the exposure for average landscape by the number given for the class of subject.

1/8 *Studies of sky and white clouds.*

1/4 Open views of sea and sky; very distant landscapes; studies of rather heavy clouds; sunset- and sunrise-studies.

1/2 Open landscapes without foreground; open beach, harbor- and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds; snow-scenes with no dark objects; most telephoto subjects outdoors; wooded hills not far distant from lens.

2 Landscapes with medium foreground; landscapes in fog or mist; buildings showing both sunny and shady sides; well-lighted street-scenes; persons, animals and moving objects at least thirty feet away from the camera.

4 Landscapes with heavy foreground; buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red-brick buildings and other dark objects; groups outdoors in the shade.

8 Portraits outdoors in the shade; very dark near objects, particularly when the image of the object nearly fills the plate and full shadow-detail is required.

16 to 48 Badly-lighted river-banks, ravines, glades and under the trees. **Wood-interiors** not open to sky. **Average indoor-portraits** in well-lighted room, light surroundings.

Example:

The factors that determine correct exposure are, first, the strength of light; second, the amount of light and dark in the subject; third, speed of plate or film; fourth, the size of diaphragm used.

To photograph an *open landscape, without figures,* in April, 2 to 3 P.M., bright sunshine, with plate from Class 1, R. R. Lens, stop F/8 (or U. S. 4). In the table look for "hour," and under the column headed "Bright Sunshine," note time of exposure, 1/40 second. If a smaller stop is used, for instance, F/16, then to calculate time of exposure multiply the average time given for the F/8 stop by the number in the third column of "Table for Other Stops," opposite the diaphragm chosen. The number opposite F/16 is 4. Multiply 1/40 × 4 = 1/10. Hence, exposure will be 1/10 second.

For other plates consult Plate-Speeds Tables. If a plate from Class 1/2 is used, multiply the time given for average exposure, F/8 Class 1, by the number of the class. 1/40 × 1/2 = 1/80. Hence, exposure will be 1/80 second.

PLATES. When plates other than those in Class I are used, the exposure indicated above must be multiplied by the number given at the head of the class of plates.

PHOTOGRAPHIC EXHIBITIONS

Information for publication under this heading is solicited

Society or Title and Place	*Date*	*Particulars of*
BROOKLYN INST. OF ARTS AND SCIENCES		
Annual Photographic Exhibition	April 19 to May 3, 1913	R. W. Coit, 56 Prince St., N. Y. City
KODAK EXHIBITIONS		
Convention Hall, Washington, D. C.	Mar. 24 to 29, 1913	Eastman Kodak Company
Carnegie Music Hall, New York City	Mar. 31 to April 5; and April 7 to 12, 1913	
Brooklyn Academy of Music, Brooklyn	April 14 to 19, 1913	
Lyric Theater, Baltimore, Md.	April 21 to 26, 1913	
PHOTOGRAPHIC SOCIETY OF PHILADELPHIA		
PHOTO-ERA Prize-Pictures	Mar. 1 to April 1, 1913	Maurice T. Fleisher,
Paul Lewis Anderson's Exhibition	April 1 to May 1, 1913	Oxford & Moscher Sts., Phila.

Notes on the Use of Exposure-Meters

FOR those who wish to use a meter that is accurate in all conditions, we can recommend both the Wynne and Watkins. Full directions for use are given with each outfit and the manipulation is very simple. An actinometer or exposure-meter is a very useful adjunct to one's camera outfit, for it is so constructed that it measures the correct time of exposure under different conditions of light, speed of plate and size of stop used.

For a practical and lucidly-written article on the use of exposure-meters, at all seasons of the year, see PHOTO-ERA, January, 1912.

Plate-Speeds for Exposure-Guide

Class-numbers. No. 1, Photo-Era. No. 2, Wynne. No. 3, Watkins

Class 1/3, P. E. 156, Wy. 350, Wa.

Lumière Sigma

Class 1/2, P. E. 128, Wy. 250, Wa.

Barnet Super-Speed Ortho
Ilford Monarch
Seed Gilt Edge 30

Class 3/4, P. E. 120, Wy. 200, Wa.

Ansco Film, N. C. and Vidil
Barnet Red Seal
Central Special
Cramer Crown
Defender Vulcan
Ilford Zenith
Hammer Red Label
Imperial Flashlight
Eastman Speed-Film
Seed Color-Value
Wellington 'Xtra Speedy

Class 1, P. E. 111, Wy. 180, Wa.

American
Barnet Extra Rapid
Barnet Ortho Extra Rapid
Barnet Studio
Ensign Film
Imperial Special Sensitive
Imperial Non-Filter
Imperial Orthochrome Special Sensitive
Kodak N. C. Film
Kodoid
Lumière Film and Blue Label
Premo Film Pack
Seed Gilt Edge 27
Standard Imperial Portrait
Standard Polychrome
Stanley Regular
Vulcan Film
Wellington Anti-Screen
Wellington Film
Wellington Speedy
Wellington Iso Speedy

Class 1 1/4, P. E. 90, Wy. 180, Wa.

Central Comet
Cramer Banner X
Cramer Instantaneous Iso
Cramer Isonon
Cramer Spectrum
Defender Ortho
Defender Ortho, N.-H.
Eastman Extra Rapid
Hammer Extra Fast
Hammer Extra Fast Ortho
Hammer Non-Halation
Hammer Non-Halation Ortho
Seed 26x
Seed C. Ortho
Seed L. Ortho
Seed Non-Halation
Seed Non-Halation Ortho
Standard Extra
Standard Orthonon

Class 1 1/2, P. E. 84, Wy. 160, Wa.

Cramer Anchor
Lumière Ortho A
Lumière Ortho B

Class 2, P. E. 78, Wy. 120, Wa.

Cramer Medium Iso
Ilford Rapid Chromatic
Ilford Special Rapid
Imperial Special Rapid
Lumière Panchro C

Class 3, P. E. 64, Wy. 90, Wa.

Barnet Medium
Barnet Ortho Medium
Hammer Fast
Seed 23
Wellington Landscape
Stanley Commercial
Ilford Chromatic
Ilford Empress
Cramer Trichromatic

Class 5, P. E. 56, Wy. 60, Wa.

Cramer Commercial
Hammer Slow
Hammer Slow Ortho
Wellington Ortho Process

Class 8, P. E. 39, Wy. 30, Wa.

Cramer Slow Iso
Cramer Slow Iso Non-Halation
Ilford Ordinary
Cramer Contrast
Ilford Halftone
Seed Process

Class 100, P. E. 11, Wy. 3, Wa.

Lumière Autochrome

XUM

BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices.

JAHRBUCH FUER PHOTOGRAPHIE UND REPRODUKTIONS-TECHNIK, FUER 1912. Herausgegeben von Dr. Josef Maria Eder. 26. Jahrgang. Mit 252 Abbildungen und 17 Kunstbeilagen. Preis, 8 Mark ($2.00). Halle a.S.: Wilhelm Knapp, 1912.

Dr. Eder rises like a giant among his fellow-workers in the domain of photographic science, and his name associated with any photographic publication spells superexcellence and success. Thus the German photographic annual, which he has edited for twenty-six consecutive years, occupies in continental Europe the place that the British Yearbook does for Great Britain and all English-speaking countries. With proverbial German thoroughness Dr. Eder has surveyed and investigated every branch of photographic activity throughout the civilized world during the year of 1912, and presented the results of his researches in a systematic, comprehensive form. No process, invention, improvement or device in any form and worthy to be recognized as helpful or instructive to the worker in any of the numerous departments of photography has been slighted, and topics which may appear too profound to the average practitioner will be read with avidity by the advanced specialist. Among the numerous chapters devoted to specialized subjects are, Photographic Optics; Photogrammetry; Telephotography; Kinematography; Projection; Microphotography; Darkroom-Illumination; Artificial Light; Three and Four Color Photography; Photography in Natural Colors; Photo-Chemistry; Electricity and Magnetism in Connection with Light-Action; Spectrum-Photography; Influence of the Ultra-Violet Ray; The Latent Image; Reversed Images; The Rays of Radium, Röntgen, Canal and Cathode; Application of Photography to the Sciences; Criminology. There is a large number of original articles on modern processes by first-rank specialists; a complete list of photo-patents issued in Germany and Austro-Hungary during the past year; a superb series of full-page illustrations in monochrome, tint and natural colors of selected printing-processes. The text comprises 780 pages, with 252 illustrations, the paper and typography are unsurpassed, and, although there are but few advertisements, the book is nearly as thick as the British Annual. A most desirable addition to the library of every serious practitioner.

COMPOSITION. A Series of Exercises in Art-Structure for the Use of Students and Teachers. By Arthur W. Dow. Seventh Edition, Revised and Enlarged. With Numerous New Illustrations and Color-Plates. Format 9½ x 11½ inches. Price, $4.00 net; postage, 25c. Doubleday, Page & Company, 1913.

The reappearance of this standard work on art-instruction, after a lapse of seven years, and when the last edition was sold out, will be welcomed by all serious students in pictorial photography. The author, himself a painter of sterling merit, has occupied the position of professor of fine arts in Teachers College, Columbia University, New York City, for some years and therefore speaks with authority. This work is based upon his experience in painting and teaching for more than twenty years. The first edition of "Composition" was published in 1899, and in this present revision he has made many additions and used new illustrations without departing from theory and principles. The contents is composed of twelve chapters which deal with line-drawing; principles of composition; line; notan (the chief element in illustration, charcoal drawing, mezzotint, oriental ink-painting and architectural light and shade) and color.

The student starts from the foundation, aided by the best examples in classic art and analytical illustrations, grasping the basic principles of composition, harmony, opposition, subordination, repetition and symmetry. Numerous examples are also given of the various forms of composition, how these are used in portraiture, landscape, architecture, decoration, designing and illustrating. The department of color is also fully considered. Not only is the theory of color lucidly expounded, but the practical application of sound principles is illustrated by several series of superb color-plates. In this manner the student can see at a glance the artistic effect of combinations of colors in their great variety of hues and shades, evolving new and pleasing harmonies.

The modern photographer who has a sound and practical knowledge of painting has a tremendous advantage over his less favored competitor. This cannot be disputed. Indeed, a number of the most successful portrait-photographers are painters of signal ability. Therefore, a practical knowledge developed from a natural aptitude for drawing and a refined sense of color will prove of inestimable benefit to the photographic practitioner, whether amateur or professional, and this knowledge may be derived from the lessons so ably and convincingly presented in this valuable work by Arthur W. Dow, several extracts of which we have published in this issue. The color-plates are remarkable for their clearness and correctness, which is extremely important, for this work serves as a trustworthy guide to students in painting. The book will be sent, safely packed and postpaid, by PHOTO-ERA, on receipt of $4.25.

DEUTSCHER PHOTOGRAPHEN-KALENDER. Edited by Karl Schwier. 32d year. Price, 2 marks ($0.48). Weimar, Germany: Karl Schwier.

The popular photographic pocket-diary resembles in general character the one published by Burroughs & Wellcome, but is printed in German and in Roman type. This is Part One of what has appeared heretofore in two separate volumes; but Part Two is omitted this year, because the returns did not pay for the enormous amount of time and effort expended. The contents is similar to other annuals — recipes, technical methods and data, tables of all sorts for the practical worker, but carefully selected and edited. This pocket-calendar appeals particularly to the craftsmen of Germany and Austro-Hungary, but is equally useful to any worker familiar with German.

PHOTOGRAPHISCHER ABREISS-KALENDER, 1913. Size 7 x 11 inches. 118 Illustrations in halftone. Preis, postpaid, $0.62. Halle, a.S.: Wilhelm Knapp.

This Photographic "Tear-Off" Calendar is very popular in Germany. Every serious worker has one hanging up in his darkroom, studio, office or home. There are 118 excellent halftone illustrations which cover every phase of pictorial photography and are, in themselves, entertaining and instructive. Beneath each picture is a recipe, suggestion or fact of practical value. Why such a useful accessory has not been issued by some American firm, has long puzzled us. The price of this attractive pad-calendar is low enough for everybody.

BERLIN LETTER

MAX A. R. BRÜNNER

THE winter is now nearly past, and with it the large number of balls, banquets and other festivities. The writer happened to be present at the winter-ball of the Freie Photografische Vereinigung Zu Berlin in the Chorallion Hall. After a musical introduction, Professor Scheffer showed us interesting experiments with ultra-violet light, accompanied by a humorous lecture. But the best feature of the evening was an illustrated lecture by Mr. M. Petzold on natural beauty with special reference to the sea-coast. Wonderfully colored sea-scapes were shown, meanwhile the organ playing appropriate music. The impression of this novel and very successful conbination of two artistic factors was beyond description, and the applause lasted for many minutes.

In the February Berlin letter I spoke of the twenty-fifth anniversary of the German Emperor's ascension to the throne, and spoke of him as almost the victim, during this season of camera-hunters. A few years ago a remark of his was widely discussed in our daily papers and, of course, in our trade-journals, in which he expressed his displeasure of the nuisance of his portrait being constantly taken and often published. He publicly commanded that no one should publish a photograph of him, or of any member of the Royal family, unless he himself had seen the picture before and had given it his approval. In reference to this it may be appropriate to consider the German law which deals with what is called "mental property," of which that about literary matter contains sixty-four rules, and that about pictures fifty-five. The latter, which interests us more, has been revised and went into force Jan. 9, 1907. Every person using the camera, whether for pleasure or for business, whether a native or a foreign visitor, should, to avoid trouble, know at least the most important features of this law. Section 22 says; Portraits of persons can be reproduced or exhibited *only* with the permission of the sitter. If the latter, however, receives a fee, in any form, for being photographed — as is the case with models — special permission is not required. Section 23 makes an exception of historical personages, criminals, and those who play a minor part in landscapes, street-scenes, parades, meetings, etc. Now there is no doubt that the Kaiser and members of his family are historical persons, and, therefore, have fewer rights than an ordinary citizen. There is no law which protects the Emperor from being photographed and his portrait published. In case a camera-fiend holds up traffic in our public thoroughfares, he is stopped by the police for that reason only, and not for having violated Rule 22. If such a man were quick enough to take a snapshot of some famous person, he cannot be forbidden to reproduce his picture. When, one day, the Kaiser was seriously molested in Wiesbaden by a number of press-photographers and amateurs — among whom were many foreign tourists — he sent word to all his court-photographers that he would not favor them with any order in the future, unless they signed a contract that no picture of him or the family of Hohenzollern should be published without his permission. Now all photographers, except one, signed it, and to these, of course, Section 23 applies no longer. Thus, any American visiting Germany with his camera may snapshot and reproduce a member of the Imperial family, his castle, garden, automobiles, horses, etc., and no policeman has the right to stop him unless he holds up traffic or has entered the building or premises; for inside a building, say his castles or stables, or halls where he attends a meeting or festivity, no picture must be made. In another case, however, the Emperor may forbid the publishing of his portrait: viz., if the latter is to be used for the purpose of offending him. This has, indeed, been done by retouching the picture and making a caricature, whereupon the authors were punished.

What I have said applies to any person in the public eye, such as statesmen, prominent government officials, inventors, artists, etc. Another important rule is Section 20, according to which the photographing and publishing of any piece of architecture, garden or street which is permanent, is free to anyone. This implies that temporary buildings, like exhibition-halls or places of amusement, must not be reproduced, and also no interiors, even of permanent buildings. Pictures, whether paintings or photographs, are the sole property of the originator, and other people reproducing them are liable to a fine as high as 3,000 marks. As so few persons are sufficiently acquainted with this important law, I included a chapter treating that subject at length in the recently published book, Die Illustrations Photographie, by Brünner and Dietze, Frankfort, Ohio.

In the February correspondence I mentioned the appearance of a large volume, entitled DER KAISER IM FILM. I find it quite novel and interesting. A large number of portraits of William II and other members of the Royal family are shown here in such situations as they were caught by the kinematographic camera. For all these pictures were made by kinematography and not with ordinary cameras. Our largest kino-concerns have participated, and in a certain sense the book is an archive of opinions and thoughts about the value of kinematography. Included are autograms, aphorisms of famous personalities in the fields of literature and art, so far as they concern the person of Emperor William.

Speaking of literary products I may add a wonderful work called "Germany in Color-Photography," consisting of several volumes. The first one, dealing with the Mark of Brandenburg, has just come out. Franz Görke, the director of the well-known Scientific Society Urania, which owns a unique theater for illustrated lectures, issues this work. The province of Brandenburg, of which Berlin is the capital, is often called the "Sandbox of the Empire," as it is said to offer nothing but sandy landscapes. Much injustice is thus done, for the province contains many very beautiful spots, and is noted for its numerous picturesque lakes and rivers. Several of these attractive places are somewhat hidden, and the casual observer overlooks them. Anyone having seen the wonderful color-photographs in the above-mentioned book, will at once admire the natural surroundings of the Imperial City.

In closing this correspondence, I may mention a novel and useful device for the studio. Modern photographers have lately been using projected backgrounds instead of the usual painted ones. This is an idea introduced by Herr Sontag of Erfurt, and makes the studio-proprietors independent of painted backgrounds, which are generally limited in variety of artistic design. The model is placed in front of a plain monochrome ground made of translucent paper or cloth, upon the other side of which is projected, by means of a stereopticon, a lantern-slide of some appropriate scenery or design. The variety of subjects for this purpose is limited only by the resourcefulness of the portrait-photographer. As the color of this particular screen is not seriously affected by the studio-light, and the luminous background is very brilliant, portraits, including the background, can be made in the usual manner and the exposure is not increased.

XUM

LONDON LETTER

CARINE AND WILL A. CADBY

Grand Hotel,
Morgins-les-Bains, Switzerland.

THOSE of our readers who dip into our monthly letters only for the photographic doings of England, will, we are afraid, be disappointed; for we are on holiday, away in the snow-mountains of Switzerland, where London news reaches us only through letters and photographic papers. So we hope that readers of PHOTO-ERA will forgive us if, for once, we are less factual and more chatty than usual.

In these winter-sport centers where — as is the case in this village — some two hundred English people take possession of the two or three hotels, and live as one big, happy family, and ordinary conditions of life are entirely upset. Visitors shed their years as easily as the fir trees divest themselves of the snow in the sun, and all, for the brief merry time, become young. Ski-ing expeditions, skating carnivals, bobsleigh runs, curling contests, and fancy-dress dances are all forcing houses for friendships that grow like mushrooms; but, we are glad to add, are often more lasting. Small wonder then, that under such conditions, and with a blazing sunset in a deep blue sky, it is difficult to write, or even think, of the doings of our gray island up North.

Needless to say, in a community of a couple of hundred more or less well-to-do people, photography plays a large although not very serious part. Everyone carries a camera, but the only tripod we have seen in the village, is our own. It is all snapshot-work ; or, should we say, play ? and hardly one visitor in fifty would know the uses of a focusing-screen. That does not seem to matter in the least, for the ease with which the modern "mystery-box" can be manipulated, coupled with the exact yet simple directions issued by the manufacturers, render results possible, even from the very beginner, that we should have thought a marvel in the old wet-plate days; and visitors depart with reminiscences of their happy time that are worth preserving.

While taking photographs up here in the snow, we have been struck by the possibilities of amplification contained in some of them. For instance, a sharply focused view of a snow-hill on which a large number of ski-ers were disporting themselves, quite oblivious of the camera, revealed on close examination many isolated figures in quite unconscious and yet graceful attitudes, which, if carefully enlarged by themselves, would make camera snow-sketches of absorbing interest, not only because of the characteristic, natural attitudes of the models, but also for the artistic effect of the light background.

Of course, certain conditions are necessary, one of which is full exposure, or the figures will simply appear as silhouettes. The negative must be gently developed, and — but there, we must not go further into details, or we shall spoil the article we intend to write on the subject when we have made a few more experiments in the way of illustrations. At all events, there is one great advantage in this sort of portrait-photography, we have none of the unpleasantness and terror of asking people to stand, and seeing what was a delightfully easy pose stiffen into awkward self-consciousness, which leaves us wondering if it is better to go through the formality of spoiling a plate for politeness' sake, or frankly telling our victim that the spontaneous attitude has been blighted by the sight of the camera. All we have to do is to set up our apparatus wherever moving figures are to be seen against a white background, and make our exposure when the greater number appear in the most natural attitudes: great sport, especially when we come to count our "catch" on the negative!

Although there is a distinct photographic atmosphere about this place it is very different from the one we left behind us in London. We came away fresh from the big events in our little world and now are plunged into the midst of very amateur photographic gossip. It is a change, after seeing Mr. Mortimer's wonderful seascapes and Mr. Blake's Portuguese pictures at the one-man shows, to be asked to look at small prints showing groups of ski-ers, or rows of skaters, linked arm in arm, thoroughly camera-conscious — to borrow a word of Mr. Ward Muir — or even views of hillocks, the originals of which were mighty mountains.

We have met but one photographer here who has done serious work and he remarked to us, apropos of photography here compared to London, "After the reality the shadow," but one doubts very much if his trite little summing-up of the situation had very much truth in it. Are not the little prints which satisfy the people here, perhaps, more the reality than more ambitious attempts ? After all, the snapshooter is out to get a record of what he sees, and what is very real. He is not swayed by too many considerations, nor influenced by effects of lighting, composition, etc., he simply goes for actual facts, and although he may make many mistakes and sometimes fail altogether, he yet often surprises the camera into yielding him some remarkably good and truthful results. We are beginning to realize that old hands miss a good many chances through being too critical. We find it very difficult readily to seize an opportunity, especially with photographs of sports; we wait, perhaps, until the figures look less mixed up, until the background is better, until the whole thing composes better, until, in fact, it is too late, and the beginner has got it and is winding away his exposed film.

And whether the prints we see are the reality or not, does not much matter, for to a photographer who loves his craft all results of it are interesting, and he will not find the poorest print boresome. If there is nothing else worthy of attention in it, it is, at least, another person's point of view.

There is a party of people from the States here who have spent a holiday winter-sporting in the Rockies, and who have interested us all very much by their accounts of doings there; but alas! none of them has any photographs with him to help give us an idea what it is like. Even the smallest print of the ski-ing slopes at Banff would be more valuable and telling than any information they can convey in words.

London folk have lately had a chance to see motion-pictures with the Rocky Mountains as a setting, for Mr. Cherry Kearton, that well-known Nature photographer, has been showing the results of his trip there in the shape of life-like motion-pictures. A Polish photographer, Mr. Kasimir de Proszynki, has invented a wonderful contrivance called the Aeroscope Cinematograph Camera, which is going to revolutionize the method of taking living pictures. It works very simply with a small engine driven by compressed air and weighs only 14 pounds. What may interest amateur photographers is the fact that there is a smaller compact Aeroscope, weighing, when loaded with film, only 7 pounds. Mr. Kearton prophesies a big future for this Aeroscope, and when one hears that the camera and projector together cost only ten pounds sterling ($50), and it can project the picture on the screen, five by five feet, one can well believe it.